

PACIFIC LINGUISTICS

Series B - No. 13

A COMPARATIVE STUDY OF KUMAN AND PAWAIAN

by

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First published 1969. Reprinted 1981.

The editors are indebted to the Australian National University for help in the production of this series.

This publication was made possible by an initial grant from the Hunter Douglas Fund.

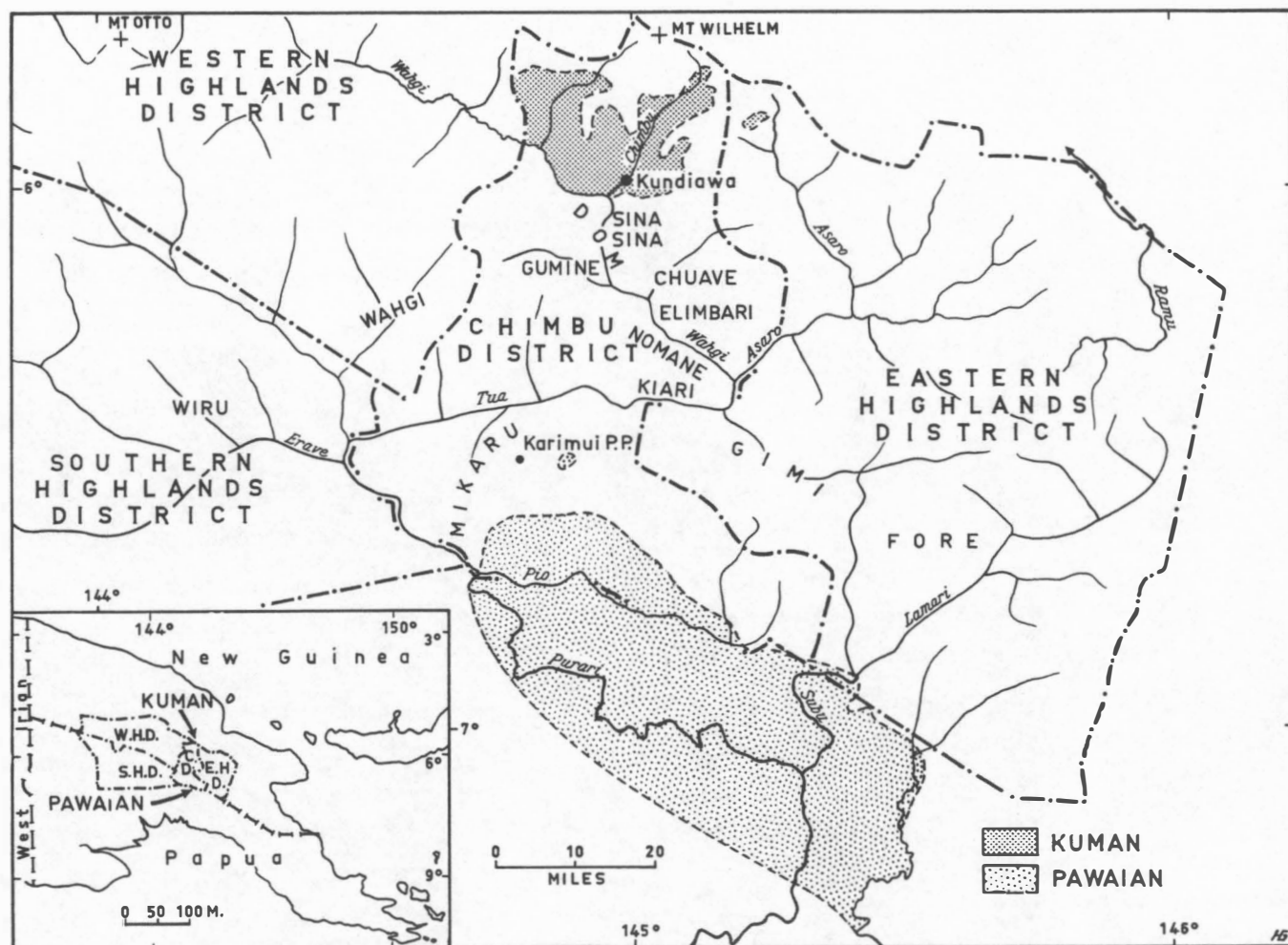
National Library of Australia Card Number and ISBN 0 85883 046 9

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LOCATION OF KUMAN AND PAWAIAN LANGUAGES



DEPARTMENT OF HUMAN GEOGRAPHY, A.N.U.

Pacific Linguistics Series A, No.13, 1969.

INTRODUCTION

Dr Stephen Wurm in a series of articles which he has written on the East New Guinea Highlands language phylum states that the Pawaian language of the Gulf and Eastern Highlands Districts is remotely related to it¹. He has based his conclusion on a 3-5 per cent correspondence of Glotto-chronologic sames which he found when comparing Pawaian and languages of the Phylum. A comparison based on a Swadesh 100 word list. The purpose of this Thesis is to test out his conclusion by comparing Pawaian with Kuman, one of the languages of the Phylum. The comparison will be taken at all levels, from the phonologic to the syntactical, in an effort to see if the structural evidence corresponds with the lexical.

The studies will be based on six months language work in Kuman, and eighteen months work in Pawaian. Much ground was covered in the Kuman language through the help of Mr Willie Kunauna, an English speaking clerk from the Waile Council in the Chimbu Sub-district of the Eastern Highlands. 'A Kuman Grammar' by W. Bergmann of the Lutheran Mission was also helpful. 'A Kuman Language Course' by D. and J. Trefrey, was used considerably. The Pawaian material was mainly gained using the monolingual approach with members of the Walio clan of the Karimui Plateau acting as informants.

Kuman is the language spoken by the people of the Northern half of the Chimbu Sub-district in the Eastern Highlands District. There are approximately 65,000 speakers of this language. It is one of the languages of the Hagen-Wahgi-Jimi-Chimbu family.

Pawaian is spoken over a large tract of country by a relatively small population. Some of the speakers are yet to be censused, but it is estimated that their total number should be about 2,000. About 500 of them live in the Eastern Highlands and the rest are scattered along the Pio and Purari Rivers of the Gulf District.

The following map will show geographical relationship of the two languages. It will be noted that at least two languages separate them. Both of these languages are included in the Eastern Highlands language Phylum. In fact all the languages north of Pawaia belong to this phylum.

LEXICAL COMPARISON

The first step of the study will be to compare the items found on a Swadesh 100 word list to see what percentage of glotto-chronological sames are registered. Another 100 common words will also be compared. According to Swadesh's finding this second list should produce less glotto-chronological sames than the first one.

Comparison of Swadesh Word List in Kuman and Pawaian

	English	Pawaian	Kuman
1.	<i>all</i>	neinana	munda
2.	<i>ashes</i>	sidai	yegum
3.	<i>bark</i>	in həj	endi ganggi
4.	<i>belly</i>	souma	deno
5.	<i>big</i>	hoj	kande
6.	<i>bird</i>	deř	kua
7.	<i>bite</i>	yawasų	sunɡua
8.	<i>black</i>	obu	kama
9.	<i>blood</i>	seni	bořumai
10.	<i>breast</i>	emi	amuno
11.	<i>burn</i>	iřiasų	gakųkwa
12.	<i>claw</i>	ogu	winagte
13.	<i>cloud</i>	suřa	kamkua
14.	<i>cold</i>	nimi	iř
15.	<i>come</i>	peřasu	onɡua
16.	<i>die</i>	ořasu	gokųkua
17.	<i>dog</i>	hə	akų
18.	<i>drink</i>	hatisų	neunɡua
19.	<i>dry</i>	sarasų	kugandunɡua
20.	<i>ear</i>	nxi	kunano
21.	<i>earth</i>	so	magan
22.	<i>eat</i>	hatisųe	neunɡua
23.	<i>egg</i>	yo	mugto
24.	<i>eye</i>	to	gumutino
25.	<i>fat</i>	ořa	wam
26.	<i>flesh</i>	mi	miya
27.	<i>feather</i>	yuli	ingo
28.	<i>fire</i>	sia	donga
29.	<i>fish</i>	waři	bagte
30.	<i>fly</i>	aenenasųe	endonɡua
31.	<i>foot</i>	hxi	katino
32.	<i>full</i>	hqiasųe	kausunɡua

33. <i>give</i>	imasye	teungua
34. <i>good</i>	moi	wagai
35. <i>green</i>	gue	muřundu
36. <i>hair</i>	sı	inguno
37. <i>hand</i>	nemi	onguno
38. <i>head</i>	mu	bitino
39. <i>hear</i>	nei hetisyē	puřukua
40. <i>heart</i>	meaboř	munduno
41. <i>horn</i>	-	-
42. <i>I</i>	<u>ana</u>	<u>na</u>
43. <i>kill</i>	nawaisye	sıngokꞑkua
44. <i>knee</i>	obu	gogino
45. <i>know</i>	hořanasye	puřukua
46. <i>leaf</i>	sı	yaundo
47. <i>lie</i>	yanbiasye	ukꞑ paiungua
48. <i>liver</i>	senai	mungo
49. <i>long</i>	ioi	olꞑto
50. <i>louse</i>	poř	numan
51. <i>man</i>	<u>yala</u>	<u>yakꞑ</u>
52. <i>many</i>	howodie	meře
53. <i>meat</i>	-	-
54. <i>moon</i>	we	ba
55. <i>mountain</i>	soso	magan mugꞑo
56. <i>mouth</i>	meni	diřano
57. <i>name</i>	hopi	kangin
58. <i>neck</i>	pꞑa	nuguno
59. <i>new</i>	ye	erıme
60. <i>night</i>	yuno	anduweři
61. <i>nose</i>	hq	gumano
62. <i>not</i>	se	taman
63. <i>one</i>	pomi	suařa
64. <i>person</i>	toi	tege
65. <i>rain</i>	yama	kamun
66. <i>red</i>	sia	gokꞑ
67. <i>road</i>	sꞑ	konbo
68. <i>root</i>	peřadie	dugꞑuo
69. <i>round</i>	taři	mengu
70. <i>sand</i>	suařu	ogupu
71. <i>say</i>	hꞑesye	kateungua
72. <i>seed</i>	yo	mungo
73. <i>see</i>	hetisyē	kanungua

74. <i>sit</i>	ewenasuε	mokɰkua
75. <i>skin</i>	heɿ	gangino
76. <i>sleep</i>	oyetisuε	ugɰ paungua
77. <i>small</i>	homi	kembeŋa
78. <i>smoke</i>	yɰ	ingε
79. <i>stand</i>	yanbiasuε	andikɰkua
80. <i>star</i>	noɰ	kukɰ
81. <i>stone</i>	tobu	kombugɰo
82. <i>sun</i>	ɸl	ande
83. <i>swim</i>	onasuε	atineongua
84. <i>tail</i>	tul	yagɰε
85. <i>that</i>	wa	inda
86. <i>this</i>	a	i
87. <i>thou</i>	ono	ene
88. <i>tongue</i>	hemina	dirambino
89. <i>tooth</i>	su	singuno
90. <i>tree</i>	in	endi
91. <i>two</i>	nau	suo
92. <i>walk</i>	uyatisuε	konbougua
93. <i>warm</i>	howi	piragɰendi
94. <i>water</i>	sa	nikɰ
95. <i>we</i>	nono	nono
96. <i>what</i>	nodi	siŋakɰ
97. <i>white</i>	poi	kiruo
98. <i>who</i>	mai	iŋa
99. <i>woman</i>	oi	ambu
100. <i>yellow</i>	sewai	dindungua

Comparison of another 100 Common Words

1. <i>afterwards</i>	yei	oku
2. <i>angry</i>	oŋauhɰesɰε	kundeŋo
3. <i>and</i>	yobu	kaukɰ
4. <i>arrow</i>	sɸ	kimbiŋi
5. <i>back</i>	bolu	moku
6. <i>bad</i>	mεedi	kinde
7. <i>bag</i>	wo	gakɰ
8. <i>bamboo</i>	tabo	mengaku
9. <i>banana</i>	yɔ	kambe
10. <i>be hungry</i>	siminisɰε	kindangokɰ
11. <i>be sick</i>	biliniasɰε	kindasungua
12. <i>bean</i>	hokoya	ondukɰ
13. <i>beard</i>	mimi	inggo

14. <i>before</i>	hɣadi	oguna
15. <i>below</i>	salɔ	atine
16. <i>blow</i>	hoʁisɥɛ	pundusungua
17. <i>boy</i>	pɛ	kumukɔ
18. <i>bring</i>	i bɛbedasɥɛ	kuwungua
19. <i>bone</i>	<u>yɛmi</u>	<u>yambiʁo</u>
20. <i>brother</i>	mau	aŋgiʁa
21. <i>butterfly</i>	tua	kwɪmekalme
22. <i>broken</i>	nomu	bigɛ
23. <i>close</i>	yanamasɥɛ	yongiriambi
24. <i>have a cold</i>	tualisɥɛ	nusungua
25. <i>cook</i>	humasɥɛ	keungua
26. <i>cry</i>	dɛlisɥɛ	kaieʁukua
27. <i>cucumber</i>	<u>sɛna</u>	<u>sugɬa</u>
28. <i>cut</i>	onasɥɛ	keɣu
29. <i>dance</i>	tiabisɥɛ	aiken
30. <i>dirty</i>	pɥ	bi
31. <i>door</i>	sɥ	yungundiʁa
32. <i>drum</i>	habidi	oŋgun
33. <i>eel</i>	sia	kwiye
34. <i>elder</i>	nenau	kindakɔ
35. <i>enough</i>	tebie	piʁawe
36. <i>father</i>	abu	nino
37. <i>fear</i>	yasue	kondukɔŋgokɔ
38. <i>fence</i>	<u>taida</u>	<u>tokɔ</u>
39. <i>fill</i>	yau	kaw
40. <i>finger</i>	wid	Mongo
41. <i>find</i>	tosulanasɥɛ	doko
42. <i>finish</i>	se	kondi
43. <i>fingernail</i>	keɓɪd	giʁe
44. <i>forest</i>	<u>olido</u>	<u>endɪle</u>
45. <i>get</i>	<u>iasɥɛ</u>	<u>yeungua</u>
46. <i>girl</i>	oi	ambai
47. <i>go</i>	petazɥɛ	oŋgua
48. <i>grass</i>	mou	kukɔ
49. <i>grow</i>	selasɥɛ	kukɔsungua
50. <i>half-full</i>	hɣadiamo	giʁe bengai
51. <i>hat</i>	kokomo	gakɔpugɬa
52. <i>hawk</i>	<u>kɛmɛʁagi</u>	<u>kegemba</u>
53. <i>here</i>	ɛni	mala
54. <i>high</i>	tɛʁowi	mitina
55. <i>hit</i>	nawasɥɛ	sungua

56. <i>hole</i>	hy	maukꞥ
57. <i>house</i>	hapol	iŋgukꞥ
58. <i>hurt</i>	susꞥ	bokꞥ
59. <i>interior</i>	oli	bange
60. <i>knife</i>	hyɛni	pikꞥ
61. <i>leg</i>	hɛ	kati
62. <i>light</i>	sobali	endiweŋa
63. <i>loose (v)</i>	suazꞥ	kondo
64. <i>lose</i>	hominasꞥ	embideungua
65. <i>milk</i>	ɛmi	amniɣo
66. <i>morning</i>	ɛnau	tangima kana
67. <i>mother</i>	ɛna	mam
68. <i>near</i>	hyɛnu	mangigꞥe
69. <i>nut (pandanus)</i>	egia	amukꞥ
70. <i>old</i>	səu	mambuno
71. <i>peel</i>	sɛnadi	pakꞥsungua
72. <i>pig</i>	ya	bugꞥa
73. <i>pine tree</i>	yul	yakubane
74. <i>plant</i>	piasꞥ	gokꞥkua
75. <i>pumpkin</i>	inabol	oŋuwa
76. <i>rat</i>	pai	dua
77. <i>rope (vine)</i>	ibol	kun
78. <i>sister</i>	mauwa	ambiŋino
79. <i>skirt</i>	u	gagꞥi
80. <i>soft</i>	sonamu	wida
81. <i>snake</i>	o	togi
82. <i>slow</i>	toumu	wenakꞥ
83. <i>split</i>	pobali	ekiŋi
84. <i>stay</i>	ewinazꞥ	mokꞥkua
85. <i>stop</i>	wabasꞥ	yomgua
86. <i>sugar cane</i>	sꞥꞥi	bo
87. <i>sunshine</i>	olsꞥ	andesungua
88. <i>sweet potato</i>	sali	kaia
89. <i>talk</i>	hyɛ	kandi
90. <i>there</i>	wɛni	sugꞥo
91. <i>tobacco</i>	sogo	yiŋim
92. <i>today</i>	hqi	eŋime
93. <i>tomorrow</i>	nɛi	tongima
94. <i>touch</i>	yanai	akeungua
95. <i>trade</i>	wɛda	topo

96. <i>true</i>	<i>tiwabuc</i>	<i>kaima</i>
97. <i>wait</i>	<i>mudazuc</i>	<i>sukɿ</i>
98. <i>wallaby</i>	<i>yu</i>	<i>kambu</i>
99. <i>wash</i>	<i>sani sulo</i>	<i>nikɿ pani</i>
100. <i>wet</i>	<i>sasuc</i>	<i>kutungua</i>

From these two lists we note that there are 8 per cent probable glotto-chronologic sames in the Swadesh list and 6 per cent in the second list. This would indicate that there is a distant relationship between Pawaian and Kuman². We will now compare the phonological and grammatical structures of the two languages and will conclude by summing up the differences and similarities thus found, and see if they substantiate the findings of the Swadesh list.

PHONOLOGICAL COMPARISON

There are thirty-four phonetic segments involved in the combined sound production of Kuman and Pawaian. Eight are vowel segments and the rest are consonantal ones. The vowels will be considered first.

VOWELS

Of the eight vowel segments, seven are found in Kuman and six in Pawaian. The seven Kuman segments make five phonemes, two front, one central, and two back.

They are,

i	u
e	a o

/i/ and /o/ each have two allophones.

/i/ [i] in open syllables or preceding
velar stops.

[ɪ] elsewhere.

/o/ [ɔ] in fluctuation with [o] in
word initial position.

[o] in all positions.

In Pawaian each of the six segments are phonemes. One, /ɔ/ is only rarely found.

They are,

i	u
e	o
a	ɔ

Distribution of Vowel Segments

The following chart shows how the segments are distributed in the two languages.

Kuman phonemes	Phonetic segments	Pawaian phonemes
----------------	-------------------	------------------

/i/	{	<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div>	[i] [ɪ]	{		/i/
/e/	{	<div style="border-bottom: 1px solid black; width: 100%;"></div>	[e]	{		
			[ɛ]	{		/e/
/a/	{	<div style="border-bottom: 1px solid black; width: 100%;"></div>	[a]	{		/a/
/o/	{	<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div>	[ɔ] [o]	{		/ɔ/ /o/
/u/	{	<div style="border-bottom: 1px solid black; width: 100%;"></div>	[u]	{		/u/

The interesting features that may be noticed from the chart are:

1. The high front vowel has a wider spread in Kuman than in Pawaian.
2. The mid front vowel is higher in Kuman than in Pawaian.
3. The mid back vowel of Kuman has conditioned variants in what is two vowels in Pawaian.

CONSONANTS

Kuman has fourteen consonant phonemes and Pawaian has ten.

They are:

Kuman

p	t	k
b	d	g
	s	
m	n	
	r	
	l	g ⁴
w	y	

Pawaian

p	t	k
	s	h
m	n	
	l	
w	y	

They are made up of twenty-six different segments. Twenty-one are used in Kuman, and eighteen in Pawaian. The following chart shows how they are distributed.

Distribution of Consonants

Kuman phonemes	Phonetic segments	Pawaiana phonemes
/p/	[p ^h] [p]	/p/
/b/	[b] [^m b]	
/r/	[^v r]	
/t/	[t ^h] [t]	/t/
/d/	[d] [ⁿ d]	
/k/	[k ^h] [k]	/k/
/g/	[g] [^ŋ g]	
/s/	[^t s] [s]	/s/
	[h]	/h/
/l/	[l] [^v l] [ɿ]	/l/
/gl/	[k ^ɰ] [g ^ɰ]	
/m/	[m]	/m/
/n/	[n]	/n/
/w/	[b] [w]	/w/
/y/	[y]	/y/

In considering the chart we notice that 15 of the segments occur in both languages, 8 in Kuman only, and 3 in Pawaian only. This is illustrated in the following way.

Kuman only	Kuman and Pawaian	Pawaian only
^m b	p ^h	h
b	p	^v r
ⁿ d	t ^h	ɿ
t _s	t	
^ŋ g	d	
k ^ɰ	k ^h	
g ^ɰ	k	
l	g	

s
m
n
v
r
w
y

Also from the first chart it can be noted that those segments which occur in both languages are distributed quite differently among the phonemes. /k/, /m/, /n/ and /y/ are the only phonemes that have the same segments in both languages and even then the allophones of /k/ are distributed differently in the two systems. This information can also be charted for clarification.

Kuman distribution	Phonemes	Pawaian distribution
[p ^h] occurs initially, occurs medially in fluctuation with [p].	/p/	[p ^h] occurs initially in fluctuation with [p]. [p] occurs initially in fluctuation with [p ^h] occurs medially in fluctuation with [b]. [b] occurs medially in fluctuation with [p].
[p] occurs medially in fluctuation with [p ^h].		
[b] occurs initially in fluctuation with [m ^b].	/b/	-----
[m ^b] occurs initially in fluctuation with [b], occurs medially.		
[t ^h] occurs initially, occurs medially in fluctuation with [t].	/t/	[t ^h] occurs initially in fluctuation with [t]. occurs finally in fluctuation with [t], [d]. [t] occurs initially in fluctuation with [t ^h], occurs medially in fluctuation with [ʔ], and [d]. occurs finally in fluctuation with [t ^h], [d] and [ʔ].
[t] occurs medially in fluctuation with [t ^h].		

- [ʁ] occurs medially /r/
occurs finally.
- [d] occurs initially in /d/
fluctuation with [ⁿd].
- [ⁿd] occurs initially in
fluctuation with [d],
occurs medially.
- [kʰ] occurs initially, /k/
occurs medially in
fluctuation with [k]
and [g]
- [k] occurs medially in
fluctuation with [kʰ]
and [g],
- [g] occurs medially in
fluctuation with [kʰ]
and [k].
- [g] occurs initially in /g/
fluctuation with [ⁿg].
- [ⁿg] occurs initially in
fluctuation with [g],
occurs medially.
- [ᵀs] occurs initially in /s/
fluctuation with [s]
- [s] occurs initially in
fluctuation with [ᵀs]
occurs medially.
- [d] occurs medially in
fluctuation with [t]
and [ʁ],
occurs finally in
fluctuation with [ʁ]
[tʰ] and [t]
- [ʁ] occurs medially in
fluctuation with [t]
and [d],
occurs finally in
fluctuation with [tʰ]
[t] and [d].
- [kʰ] occurs initially in
fluctuation with [k]
- [k] occurs initially in
fluctuation with [kʰ],
occurs medially in
fluctuation with [g].
- [g] occurs medially in
fluctuation with [k].
- [s] occurs initially
occurs medially.

	/h/	[h]	occurs initially, occurs medially.
[ɭ] occurs medially	/ɭ/	[ɭ]	occurs medially in fluctuation with [ɣ]
		[ɣ]	occurs medially in fluctuation with [ɭ] occurs finally in fluctuation with [ɭ]
[gʷ] occurs medially between vowels	/gʷ/		
[kʷ] occurs medially contiguous to con- sonants, occurs finally.			
[m] occurs initially, occurs medially, occurs finally.	/m/	[m]	occurs initially, occurs medially, occurs finally.
[n] occurs initially, occurs medially, occurs finally.	/n/	[n]	occurs initially, occurs medially, occurs finally.
[b] occurs initially preceding front vowels, occurs medially preceding front vowels.	/w/	[w]	occurs initially, occurs medially.
[w] occurs initially before non-front vowels, occurs medially before non- front vowels.			
[y] occurs initially, occurs medially.	/y/	[y]	occurs initially, occurs medially.

The differences that can be noted from this last chart are as follows:

1. Though Kuman has six phonemic stops and Pawaian has only four, yet they both have ten phonetic segments making up the phonemes, Pawaian /t/ having four allophones.

2. Prenasalization of voiced stops is a feature of Kuman, but is nonexistent in Pawaian.

3. Both Kuman and Pawaian have the segment [ʔ]. However, Kuman uses it as a separate phoneme, while Pawaian has it as a submember of the /t/ phoneme.

4. Both languages have /l/, yet phonetically it is different. Kuman /l/ is equivalent to the English sound, whereas Pawaian /l/ is a retroflexed flap. Sometimes it is lateral, sometimes it is not.

5. Kuman has a laterally released velar affricate. There is no such thing in Pawaian.

6. Many Kuman speakers pronounce initial /s/ as [tʰs]. Pawaians never do this.

7. Kuman has two allophones for /w/. Pawaian has [w] in all situations.

SUPRASEGMENTAL ITEMS

It has been noted that Pawaian has fewer segmental phonemes than Kuman. This deficiency is compensated by the use of two suprasegmental phonemes, nasalization and tone. All six vowels may be oral or nasal and also carry either high or low tone. This means that potentially the six vowels can be used to form twenty-four different contrasts. In practice no more than three-way minimal pairs have been found. One often finds a difference in tone and a difference in nasalization, but nasalization never occurs on two of the words to form a four-way contrast.

For example:

[sú]	<i>tooth</i>
[sù]	<i>ginger</i>
[sỳ]	<i>road</i>
[yé]	<i>new</i>
[yè]	<i>ancestor</i>
[yê]	<i>type of nut</i>

Syllables

Pawaian and Kuman both have the same syllable types, viz.,

vowel	(V)
vowel, consonant	(VC)
consonant, vowel	(CV)
consonant, vowel, consonant	(CVC)

For example,

Kuman	(V)	/l/	<i>this</i>
	(VC)	/ir/	<i>cold</i>
	(CV)	/bo/	<i>sugar cane</i>
	(CVC)	/gak/	<i>boy</i>

Pawaian

(V)	/ó/	<i>boil</i>
(VC)	/óɪ/	<i>sun</i>
(CV)	/tó/	<i>eye</i>
(CVC)	/tòɪ/	<i>sting</i>

Though the two languages have the same syllable types, they differ in the phoneme content of the syllable and also in the type of syllables found within the word.

PHONEME CONTENT OF SYLLABLE

Each vowel of both languages may occur as the peak in all four syllable types, and all the consonants may occur as syllable onsets. There is however, a limitation as to which consonants may occur as syllable codas. In Kuman /m/, /n/, /gʰ/, /l/ and /k/ are the only ones that can occur in this position, and in Pawaian, /n/, /l/ and /t/ are the only consonants that act as codas.

For example:

Kuman

konbo	<i>road</i>
amniɡʰo	<i>milk</i>
amugʰ	<i>pandanus</i>
olto	<i>long</i>
ponok	<i>catapult</i>

Pawaian

sɪn	<i>string</i>
wòɪ	<i>grub</i>
wít	<i>finger</i>

Syllable distribution within the Word

Isolable Vowels

In Pawaian, all the vowels, both oral and nasal form words in isolation, whereas in Kuman /i/ is the only vowel that can stand alone.

For example:

Kuman

/i/	<i>this</i>
-----	-------------

Pawaian

/ì/	<i>unpalatable</i>	/í/	<i>vine</i>
/é/	<i>agreement</i>	/é/	<i>perspiration</i>
/á/	<i>this^{response}</i>	/à/	<i>wing</i>
/ò/	<i>snake</i>	ç	<i>half-full</i>
/ó/	<i>boil</i>	/ò/	<i>bald</i>
/ú/	<i>canoe</i>	/ù/	<i>hole</i>

VOWEL CLUSTERS

In Pawaian all possible two vowel clusters occur except /iu/, /eu/ and /uu/. Also all vowels occur in clusters of three and four. Twenty-eight different three vowel combinations, and sixteen four vowel combinations have been recorded. One five vowel cluster has also been discovered.

For example:

/péò/	young man	/síà/	fire
/póí/	cockatoo	/sàí/	type of fish
/sáù/	old	/yáá/	banana?
/súa/	never mind	/yááí/	not a banana
/íóí/	long	/wéáí/	pandanus type
/iáíè/	peel	/óúí/	yes
/níááí/	not a friend	/súáíè/	let it go
	/íáúáí/		did not get it ³

Kuman on the other hand does not have so many vowel clusters. In fact of the 25 possible two vowel combinations only eight have been found coming together. This dislike of vowel clusters is quite noticeable in the study of morphophonemics. Time and again there is vowel elision or assimilation rather than two vowels at morpheme boundaries coming together.

For example:

topo trade + eragaka will do = toporagaka

e is lost

eri to do + abuka he will = erabuka he will do

i is lost

e- go + ugua he perfect = ogua he went

e and u assimilate to become o.

Kuman has no cluster of more than two vowels.

CONSONANT CLUSTERS

Kuman has consonant clusters inasmuch as when the CVC syllable comes other than word final, its coda will form a consonant cluster with a following CV syllable.

For example:

konbo	road
mogkua	he stops
kanamga	we will see

There are no consonant clusters in Pawaian. The CVC pattern only occurs word finally.

CLAUSE STRUCTURE COMPARISON

The main difference between Kuman and Pawaian on the clause level is that Kuman has medial clause types as well as final ones, whereas Pawaian has only final clause types. Both languages share a basic two way division of clause types, predicate versus equational, but Kuman further divides predicate clauses, distinguishing between medial and final ones. Both languages have more than one type of equational clause.

Pawaian then, has the following clause types:

1. Predicate Clause. This covers all predicated utterances with one exception. There is an Alternative Accompaniment Clause which slightly deviates from the predicate one.

2. Demonstrative equational clause.

3. Declarative equational clause.

Kuman on the other hand, has several more divisions. It has four equational clause types and four predicate clauses. The predicate clauses consist of:

1. Independent final clauses.

2. Non-centred independent medial clauses⁴.

3. Centred independent medial clauses.

4. Dependent medial clauses.

The equational clauses are:

1. Demonstrative equational clauses.

2. Verbal equational clauses.

3. Negative equational clauses.

4. Stative clauses.

EQUATIONAL CLAUSES

Both languages indicate the equational type utterance without using any verb. The similarities in the structuring of this type are quite striking. In both languages demonstratives are used, or suffixes added to the noun. Kuman, however, sometimes has an equational type of clause without demonstratives or suffixes. There are also other minor differences.

Equational Clauses using Demonstratives

In Kuman the demonstrative *i* meaning *this*, or *ida* meaning *that*, are simply used before the noun to form the demonstrative equational clause.

For example:

ida kabe
that banana

that is a banana

owo i nig⁴ yes, this is water
 yes this water
 i ene inigira Dum This is your friend Dum
 this you friend Dum
 na gag⁴ina koro i gag⁴ My new garment is red
 I garment-my new this garment
 gog⁴
 red

In Pawaian, the demonstrative pronouns are also used but they have the equational suffix added to them.

For example:

a = this	wa = that
apa = this is	wapa = that is
apa yor	This is a banana
this-is banana	
oui wapa sa	Yes, it's water
yes that-is water	
apa ma nia Dum	This is your friend Dum.
this-is your friend Dum	
a ye yul wapa	My new garment is red
my new garment that-is	
sia yul	
red garment	

Equational Clause using Suffixes

Another way to form equational clauses in the languages is to use suffixes which verbalize the noun. This form of construction is used with a personal pronoun instead of the demonstrative. In Kuman the suffixes are: -kira and -no, -kira in statements and -no in questions.

For example:

ene yatino	Are you a married man?
you married man?	
owo na yag ⁴ kira	Yes, I'm a married man
yes I married-man-am	

The next examples contrast the difference between the verbalizing construction and the demonstrative one.

i atino	Is this a dog?
this dog?	

owo i ag⁴ *Yes this is a dog*
yes this-is dog

owo ye ag⁴ kira *Yes it's a dog*
yes he dog-is

In Pawaian the suffixial equational clause is formed by adding the declarative suffixes. These occur in the declarative slot of the verb. They indicate, statement, question and negation.

Statement = -e

Question = -a

Negation = -qi

Unlike the Kuman clause, a personal pronoun is not necessary.

For example:

ma hapola *Is this your house?*
your house

oui a hapole *Yes it's my house*
yes my house-is

e'e hapolqi *No, it's not a house*
no house-not

ya hapole *It's a pig house*
pig house-is

Negative Equational Clause

Kuman has no negative suffix that can be used in equational clauses but has a separate clause type instead. This type uses the negative particle taman at the end of the construction. It has an item, a comment and a negative.

For example:

owo ye yag⁴ taman *No⁵, he isn't a married man*
yes he married-man not

i kabena taman *This is not a banana*
this banana not

taman i nig⁴ taman *No this is not water*
no this water not

Kuman Stative Clause

In Pawaian there is no distinction made between stative or equational clauses. If some attribute is being referred to and there is no noun, then the adjective may take the declarative suffix.

For example:

in yemia *Is the wood hard*
wood hard?

yemiai	sonamue	<i>It's not hard, it's soft</i>
hard-not	soft-is	

In Kuman however, a distinction is made between equational and stative statements. Adjectives cannot take the verbalizing suffix -kira, so to form a stative clause one has a response and/or a noun phrase, followed by one or more adjectives, plus an optional negative.

For example:

ene atino	kruono	<i>Is your dog white?</i>
you dog-your	white?	
owo na atina	kruo	<i>Yes, my dog is white</i>
yes I dog-my	white	
ene bugano	podono?	<i>Is your pig big?</i>
you pig-your	big?	
taman kebera		<i>No, he is small</i>
no	small	
owo kebera taman		<i>No, he is not small</i>
yes small	not	
ye agimo	nagitino?	<i>Is his dog a puppy?</i>
he dog-his	puppy?	
owo ye agimo	nagigte	<i>Yes, his dog is a puppy</i>
yes he dog-his	puppy	

PREDICATE CLAUSES

As has already been mentioned, Pawaian has one major Predicate type clause with a minor variation for one way of forming an accompaniment clause, and Kuman has four different clause types. One of these types however, parallels the Pawaian predicate clause quite closely, so we will consider them as a pair for comparative purposes, and the other three types will be considered later.

Pawaian Predicate Clause compared with Kuman

Independent Final Clause

Kuman independent final clauses, are clauses which are independent as regards any other clauses, and which always occur as the final clauses in a sentence. Its verb carries a different set of suffixes from those of the medial clauses. They are, then, able to occur by themselves as simple sentences, and are easily identified by the morphology of the verb.

For example:

(Passages in capitals represent the independent final clause).

NA EDI UGUG⁴ EIGA

I motion house went

I went home

ENE EDI WAILE ENO?

you motion garden going?

Are you going to the garden?

na gak ag⁴edibo u AG⁴EMO INABUKA

I boy call come dog-his will get

I will call the boy to come and get his dog

NA YE AGIG⁴E BOG⁴ KODOWIGA

I he brother-his with left

I left him with his brother

Pawaian predicate clauses, are clauses in which a subject is predicated by the use of verbal structures. The subject may or may not be expressed within the clause.

For example:

ANA HAPOL NUE

I house went

I went home

ono moilo toia

you garden going?

Are you going to the garden?

ANA PE HÛEWITULO TAIE MA HÂ IASÛE

I boy will call come your dog will get

I will call the boy to come and get his dog

ANA AMQL MA MAU SÛETOLOE

I him his brother left-with

I left him with his brother

Similarities found in the two languages

1. Both languages have a basic order of Subject, followed by Object, followed by Predicate.

For example:

Kuman

gak ag⁴ sugua

boy dog hit

The boy hit the dog

yag⁴ kua kanugua

man bird saw

The man saw the bird

Pawaian

pe hā nawāue *The boy hit the dog*
 boy dog hit

yala tet henāue *The man saw the bird*
 man bird saw

2. The time slot behaves the same in both languages. If the clause has an object, then the time slot occurs immediately before the subject. If there is no object, then the time slot may occur before or after the subject.

For example:

Kuman

ediwe yag⁴ kua kanugua
yesterday man bird saw
Yesterday the man saw the bird

ediwe ene edi enga
yesterday you motion went
You went yesterday

or

ene ediwe edi enga
you yesterday motion went
You went yesterday

Pawaian

nei yala tet henāue
yesterday man bird saw
Yesterday, the man saw the bird

nei ono petie
yesterday you went
You went yesterday

or

ono nei petie
you yesterday went
You went yesterday

3. The Response slot is first in the clause in both languages.

For example:

Kuman

owo no enamga *Yes we are going*
yes we going

Pawaian

oui nono potetaie Yes, we are going
yes we going

4. Accompaniment slot follows the object in both languages.

For example:

Kuman

yag⁴ wai gak bog⁴ neugua
man sweet potato boy with ate
The boy ate sweet potato with the man

Pawaian

toi sali pe pominisoi hanue
man sweet potato boy with ate
The boy ate sweet potato with the man

5. The Instrument slot follows the subject.

For example:

Kuman

na kobug⁴o ag⁴ siga
I stone dog hit
I hit the dog with a stone

Pawaian

ana topu pai h₃ nawoe
I stone focus dog hit
I hit the dog with a stone

6. The Interrogative particle may be placed in identical places in both languages. It either immediately follows the subject or immediately precedes the predicate.

For example:

Kuman

ene sirag⁴ pire yoba bog⁴ enga?
you what for person with going
Why are you going with the man?

or

ene yoba bog⁴ sirag⁴ pire enga?
you person with what for going

Pawaian

ono nome toi pominisoi nuna?
You why person with going?
Why are you going with the man?

or

ono toi pominisoi nome nuna?
you person with why going?

7. Both languages prefer simple clause structure to complex constructions. Speakers use a series of clauses to convey an idea rather than use a single complex one. This may be due to a lack of function words similar to English prepositions. Thus the meaning is sometimes unclear in long clauses, though in other cases, when there is no ambiguity shorter clauses are still used. Let us therefore consider the following.

In Pawaian you may have the following construction:

hepetau ono hapolo sali haituie
noon you house sweet potato will eat
You can eat sweet potato in the house at noon

This is quite acceptable as there is no ambiguity but nevertheless this thought would usually be stated in two clauses.

For example:

hepetau ono hapolo toie, sali haituie
noon you house go sweet potato will eat
At noon go to the house and eat sweet potato

If time, location, or object slots were omitted so there were only four slots then the original construction would be used.

For example:

hepetau ono hapolo haituie
noon you house will eat
You can eat in the house at noon

ono hapolo sali haituie
you house sweet potato will eat
You will eat sweet potato in the house

hepetau ono sali haituie
noon you sweet potato will eat
At noon you can eat sweet potato

Another example of Pawaian showing difficulties arising out of an absence of function words is now given.

toi ya ma hapolo penaue *A man shot a pig at his*
man pig his house shot house
 or
 toi ma hapolo ya penaue *A man shot his house-pig*
man his house pig shot

This second construction, though correct, is not usually the one adopted. There seems to be too much room for misunderstanding.

Instead, an appositional phrase is used, to help clarify the meaning.

For example:

toi ya ma hapolo ya penaue *A man shot a pig, his own*
 man pig his house pig shot *house pig*

In Kuman there is this same tendency to use a series of small simple clauses to express oneself, rather than using a single complex one.

For example:

ye ene edimogon gak tenag+kua *He gave your medicine to*
 he you medicine-your boy gave *the boy*

This above example is correct but more usual is the following:

ye ene edimogon togua gak tenag+kua
 he you medicine-your gave boy gave

Also consider the following two constructions as translations of *Yesterday he ate sugar cane in the garden.*

Example 1.

ediwe ye bo walle neugua
 yesterday he sugarcane garden ate

Example 2.

ediwe ye walle mog+ bo neugua
 yesterday he garden stayed sugarcane ate

The first example is correct but the four slot version is the method usually followed.

Differences of Construction

We have just considered the similarities found between the two languages. We will now consider the differences.

1. Accompaniment

It has already been mentioned that the Accompaniment Slot precedes the Predicate or Interrogative Slot in the languages, but Pawaian differs from Kuman inasmuch as accompaniment may also be expressed by the use of two clauses juxtaposed, the second clause having a special accompaniment slot. This is the variable construction mentioned earlier.

For example:

tol sali hanu, pe hanue pomlnlsol
 man sweet potato ate boy ate with
The boy ate sweet potato with the man.

wa tol ponelo tl a ha tie pomlnlsol
 that man Ponelo return my dog return with
My dog returned with that man

2. Location

In Kuman the Location slot follows the object, but in Pawaian it precedes it.

For example:

Kuman

na yag⁴ konbo kaniga *I saw the man on the road*
 I man road saw

Pawaian

ana su toi hetoe *I saw the man on the road*
 I road man saw

3. Indirect Object

In Kuman the indirect object follows the object, whereas in Pawaian it precedes it.

For example:

Kuman

na di yag⁴ teugua *I gave the axe to the man*
 I axe man gave

Pawaian

ana toi kope imaue *I gave the axe to the man*
 I man axe gave

It is interesting to note that in Kuman it was not possible to get location and indirect object within the one clause. Informants always separated them into two clauses.

For example:

yag⁴ suna motinda na di teugua
 man garden stayed there I axe gave
 The man gave me the axe in the garden

In Pawaian, on the other hand, Location and Indirect Object may be included in the one clause, though it needs to be remembered that in most discourses Pawaian speakers prefer two simple clauses to a single complex one.

For example:

toi ana kope moilo imaue
 man me axe garden gave
 The man gave the axe to me in the garden
 or
 toi moilo ewiei, ana Kope imaue
 man garden stayed me axe gave
 The man gave the axe to me in the garden

4. Medial Clauses

As has been mentioned, Kuman has three different types of medial clauses as well as the final one, a feature that is completely lacking in Pawaian. The medial clauses differ from the final one inasmuch as their distribution within the sentence is different, and the morphology of the verb structure is different. There is also a tendency for fewer clause level slots in medial clauses.

DESCRIPTION OF KUMAN MEDIAL CLAUSES

As there are no medial type clauses in Pawaian it is not possible to make any comparisons so this section will simply be devoted to a description of the Kuman types.

1. Non-centred independent medial clauses

Non-centred independent medial clauses, are clauses which are independent of other clauses as far as the action of the clause is concerned. They are non-centred inasmuch as the verb makes no indication as to the subject, which must be the same as the subject of the following clause. They are medial inasmuch as they must be followed by another clause. This clause type has its own set of verb endings which are given in the morphology section of the paper.

For example:

(the non-centred independent medial clause is in capitals)

NA PI kaniga

I went looked

I went and looked

YE KUA KADIRE ye sugua

he bird saw he shot

He saw the bird and shot it

nono ye pire sug+moltire edi ugug+ enamiga

we him for waited motion home went

We waited for him and then went home

oku Di yobamo bug+a tau sigog+ edi kumo

later Di people-his pig some killed motion Kumo

ugamog+ oqua

hamlet went

Later Di's people killed some pigs and went to Kumo's

hamlet

2. Centred independent medial clauses

A centred medial clause is a clause which is independent of other clauses and has a different subject from the clause which follows it. The verb of the clause has a subject indicator and a marker which

indicates that its subject differs from the one in the following clause.

For example:

(The centred independent medial clause is in capitals)

YE NO BUG⁺ANO KUNOLUGUO no tog⁺imo sibukodumga

he we pig-our stole we fence-his broke

He stole our pig so we broke down his fence

YE NO MAKANO OGUO no bug⁺ano mog⁺kirukua

he we ground-our went we pig-our not-remain

He went on our land and then our pig was gone

NA KUA NEIGO ye ugug⁺ edogua

I bird ate he home went

I ate the bird and he went home

NO ORUA KEBUG⁺KO yag⁺ mie gag⁺kua

we pumpkin boiled man meat roasted

We boiled the pumpkin and the man roasted the meat

3. Dependent medial clauses

A dependent medial clause, is a clause that depends on a following clause for the completion of its meaning. The suffixes joined to the verb stem differ from those joined to the verbs of other clause types. (see morphology section). They are translated into English as conditional, temporal or result clauses. Only as temporal clauses when they are conditional, as in the following sentence: *When you will go I will eat*

For example:

(The dependent medial clause is in capitals)

NA WIBO na morag⁺ka

I coming I will stay

If I come I will stay

TE ENE YE KANKIRIBI ye ikirukua

well you he not-see he not-take

Well if you didn't see him then he didn't take it

ENE UN kamun biratinga

you come rain will wet

If you come you'll get wet

NA ENE MEREYEG⁺ MOKIBO kamun podo sinarukua

I you likeness staying rain big fall down

If I were you I would stay because its going to be heavy rain

GAK PEPA KIURITA BORAN nono edi ugug⁴ enabug⁴ka
 boy paper little writing we motion home will-go

CLAUSE STRUCTURE SUMMARY

Clause level structure is summarized in the following formulae and statements. In considering the various formulae it is to be remembered, that notwithstanding the number of optional slots that clauses may take, any one clause does not normally have more than four slots.

Kuman Clauses

Formula

$$\text{Pred Cl} = \pm \text{Res} \pm \overline{\text{T}_1} \pm \overline{\text{Sub}} \pm [\text{T}_2 \mp (\pm \overline{\text{Int}_1} \pm \overline{\text{Inst}} \pm \overline{\text{Obj}} \pm \overline{\text{IO}})] \pm \text{Acc} \pm \text{Loc} \pm \text{Int}_2 + \begin{matrix} \text{P1} \\ \text{P2} \\ \text{P3} \\ \text{P4} \end{matrix}$$

Where:	Pred Cl	=	Predicate clause
	Res		response slot
	T ₁		time slot number 1
	T ₂		time slot number 2
	Sub		subject slot
	Int ₁		interrogative slot number 1
	Int ₂		interrogative slot number 2
	Inst		instrument slot
	Obj		object slot
	IO		indirect object slot
	Acc		accompaniment slot
	Loc		locative slot
	P1		predicate slot number 1
	P2		predicate slot number 2
	P3		predicate slot number 3
	P4		predicate slot number 4

Statement

An independent final clause consists of an optional response slot, followed by an optional time slot number one, followed by an optional subject slot, followed by an optional time slot number two, followed by an optional interrogative slot number two, followed by an optional instrument slot, followed by an optional object slot, followed by an optional indirect object slot, followed by an optional accompaniment slot, followed by an optional locative slot, followed by an optional interrogative slot number two, followed by an obligatory predicate slot number one, two, three or four.

A time slot number two may not occur with any of the following:

interrogative slot number one, instrument slot, object slot, or indirect object slot.

Either a time slot number one, or a time slot number two may occur, but not both.

Either an interrogative slot number one or an interrogative slot number two may occur, but not both.

Type 1 predicate slot is filled by an independent final verb.

Type 2 predicate slot is filled by an independent centred medial verb containing a subject indicator.

Type 3 predicate slot is filled by an independent non-centred medial verb.

Type 4 predicate slot is filled by a dependent medial verb.

Demonstrative Equational Clause

Formula

$$\text{DEqCl} = \pm \text{Res:res} \pm \text{It:N} + \text{Com:N(d)}$$

Where:

DEqCl	=	Demonstrative Equational Clause
Res		response slot
res		response particle
It		item slot
N		noun phrase
Com		comment slot
N(d)		noun phrase including a demonstrative

Statement

A demonstrative equational clause consists of an optional response slot filled by a response particle, plus an optional item slot filled by a noun phrase, plus an obligatory demonstrative slot filled by a noun phrase which includes a demonstrative.

Verbal Equational Clause

Formula

$$\text{VEqCl} = \pm \text{Res:res} \pm \text{It : pro} + \text{Com:N(-kira)}$$

Where

VEqCl	=	Verbal equation clause
Res		response slot
res		response particle
It		item slot
pro		pronoun
Com		comment slot
N(-kira)		noun phrase including suffix -kira

Statement

A verbal equational clause consists of an optional response slot filled by a response, followed by an obligatory Item slot filled by a pronoun, followed by an obligatory comment slot filled by a noun phrase containing the verbalizing suffix -kira.

*Stative Clause**Formula*

$$\text{StCl} = +(\pm \text{Res:res} \pm \text{It:N}) + \text{St:adj}$$

Where:

StCl	=	Stative clause
Res		response slot
res		response particle
St		stative slot
adj		adjective

Statement

A stative clause consists of an optional response slot filled by a response particle, plus an optional item slot filled by a noun phrase, plus an obligatory stative slot filled by an adjective. Response slots and item slots are optional, but at least one must occur.

*Negative Equational Clause**Formula*

$$\text{NECl} = \pm \text{Res:res} + \text{It:N/pr} + \text{Com:N} + \text{Neg:neg}$$

Where:

NECl	=	Negative equational clause
Res		response slot
It		Item slot
res		response particle
N/pr		noun phrase or pronoun
Com		comment slot
N		noun phrase
Neg		negative slot
neg		negative particle

Statement

A negative equational clause consists of an optional response slot filled by a response particle, followed by an obligatory item slot filled by a noun phrase or a pronoun, followed by an obligatory comment slot filled by a noun phrase, followed by an obligatory negative slot filled by a negative particle.

Pawaian Clauses

Predicate Clause

Formula

$$PC1 = \pm R \pm T_1 \pm S \pm I_1 \pm [T_2 \pm (Ins \pm (L_1 \pm IO) \pm O)] \pm L_2 \pm Ac \pm I_2 \pm P$$

Where:

PC1	=	Predicate clause
R		response slot
T ₁		time slot number one
I ₁		Interrogative slot number one
T ₂		time slot number two
Ins		instrument slot
L ₁		locative slot number one
IO		indirect object slot
O		object slot
L ₂		locative slot number two
Ac		accompaniment slot
I ₂		interrogative slot number two
P		predicate slot

Statement

A predicate clause consists of an optional response slot, followed by an optional time slot number one, followed by an optional subject slot, followed by an optional interrogative slot number one, followed by an optional time slot number two, followed by an optional instrument slot, followed by an optional locative slot number one, followed by an optional indirect object slot, followed by an optional object slot, followed by an optional locative slot number two, followed by an optional accompaniment slot, followed by an optional interrogative slot number two, followed by an obligatory predicate slot.

Either a time slot number one may occur, or a time slot number two; both may not occur.

Either a locative slot number one may occur, or a locative slot number two; both may not occur.

Either an interrogative slot number one may occur or an interrogative slot number two; both may not occur.

A time number two slot may not occur with an instrument slot, a locative slot number one, an indirect object slot, or an object slot.

Demonstrative Equational Clause

Formula

$$DEqCl = \pm Res:res \pm It:N + Dem:dem(-pa) + Com:N$$

Where:

DEqCl	=	Demonstrative equational clause
Res		response slot
res		response particle
Dem		demonstrative slot
dem		demonstrative pronoun
(-pa)		verbalizing suffix -pa
It		item slot
N		noun phrase
Com		comment slot

Statement

A demonstrative equational clause consists of an optional response slot filled by a response, followed by an optional item slot filled by a noun phrase, followed by an obligatory demonstrative slot filled by a demonstrative pronoun joined to the verbalizing suffix -pa, followed by an obligatory comment slot filled by a noun phrase.

Declarative Equational Clause

Formula

$$DecCl = \pm Res:res \pm It:N + Com:Ndec$$

Where:

DecCl	=	Declarative equational clause
Res		response slot
res		response particle
It		item slot
N		noun phrase
Com		comment slot
Ndec		noun phrase with declarative suffix

Statement

A declarative equational clause consists of an optional slot filled by a response particle plus an optional item slot filled by a noun phrase, plus an obligatory comment slot filled by a noun phrase containing a declarative suffix.

PHRASE STRUCTURE COMPARISON

A comparison will now be made of the various types of phrases found in the two languages.

NOUN PHRASES

Noun phrases are fillers of the same clause level slots in both languages. They fill subject, object, indirect object and location slots. They have nouns as the obligatory head and these are modified by various satellites. The modifiers fall into the same categories as far as description, colour, number and demonstratives are concerned, except that they differ in their phrase distribution. A bigger difference however, is to be found in the fact that Pawaian includes an optional focus marker in its phrase. This feature is completely absent in Kuman. Both languages tend toward short phrases.

Phrase length

As has been stated both languages prefer to use short phrases whenever possible. Ideas that are expressed in English by lengthy phrases are divided into separate phrases or clauses in Pawaian and Kuman. The following examples will clarify this.

Pawaian examples

In Pawaian, it is possible to say:

wa toi mei ye yul sia nau
that person large new garment red two
That person's two large red garments

However, the speaker will normally use two equational clauses in order to describe the man's new garments adequately.

For example:

(noun phrases are in capitals)

wapa TOI PAI MEI YUL NAU wapa YE
that-is person focus large garment two that-is new
 YUL SIA
garment red
Those are the man's two large garments. They are
new red garments

Consider also the following:

This is possible.

toi pai A MEI YOR APOLO NEINANA hanue
person focus my large banana ripe all ate
The man has eaten all my large ripe bananas

but more likely is the following:

toi pai a yor neinana hanue. a mei yor
person focus my banana all ate my large banana
 apolo hanue
ripe ate
The man has eaten all my bananas. My large ripe bananas
he has eaten

Kuman examples

The following phrase is structurally correct.

ida yag⁴ gag⁴imo gog⁴ koro podo suo
 that man garment-his red new big two
That man's two large red garments

However, the speaker will almost invariably use an equational clause with two phrases to state the idea just given.

For example:

yag⁴ GAG⁴IMO KORO SUO I GAG⁴ PODO YA GOG⁴
 man garment-his white two this garment big and red
The man's two new garments are big and red

Another way of shortening potentially long phrases, is to divide the expression into two clauses. For example a speaker could say:

yag⁴ NA AG⁴INA NAGIG⁴E KRUO SUO sugua
 man I dog-my puppy white two hit
The man hit my two white puppies

but is more likely to say:

yag⁴ na ag⁴ina suo suguo, ag⁴ina nagig⁴e kruo sugua
 man I dog-my two hit dog-my puppy white hit
The man hit my two dogs. The two white pups he hit

Distribution of Noun Phrase

Because the languages favour short phrases over long ones you do not usually find all the slots filled in any one phrase, but by comparing several different structures one is able to arrive at the distribution.

Common features

1. The first slot in both languages is filled by demonstrative or possessive pronouns.

For example:

Kuman

(personal pronouns function as possessive pronouns in conjunction with possessive suffixes).

na kabina
 I banana-my
 I ag⁴
 this dog

Pawaian

a yor
my banana
á hā
this dog

2. A numeral is the last adjective in their phrases. (Numerals occur in numeral adjectival phrases.)

For example:

Kuman

gak suo	Two boys
boy two	
gak suo suo	Four boys
boy two two	
gak oguno kogto	suo Seven boys
boy (hand five across) two	
na kabina podo suo	My two large bananas
I banana-my big two	

Pawaian

pe nau	Two boys
boy two	
pe nau anau	Four boys
boy two and-two	
pe nau anau anau apoi	Seven boys
boy two and-two and-two and-another	
a mei yor nau	My two large bananas
my large banana two	

3. When there is more than one adjective and one denotes colour and the other is a descriptive, the colour adjective immediately follows the noun.

For example:

Kuman

ag‡ kama podo	The big black dog
dog blaek big	
na kobug‡ina kruo yobug‡are	My heavy white stone
I stone-my white heavy	

Pawaian

hoj hā opu	The big black dog
big dog black	

a nemi topu poi	<i>My heavy white stone</i>
my heavy stone white	

Distinctive Features

The common features have been mentioned and we will now consider the differences found in the noun phrase structures.

1. Position of Descriptive Modifiers

Descriptive adjectives in Kuman, follow colour adjectives and come before numerals. In Pawaian they precede the head noun, coming after demonstratives.

For example:

(descriptives are in capitals)

Kuman

i edi gog† WIDA	<i>This soft red wood</i>
this wood red soft	
gak KIDE suo	<i>The two bad boys</i>
boy bad two	

Pawaian

á sonamu in sia	<i>This soft red wood</i>
this soft wood red	
me pe nau	<i>The two bad boys</i>
bad boy two	

It is to be noted that descriptives may form included phrases in either of the languages.

For example:

Kuman

ugug† koro podo	<i>The big new house</i>
house new big	
ugug† podo koro	<i>The big new house</i>
house big new	
bo olto wakai	<i>Good long sugar-cane</i>
sugar-cane long good	
bo wakai olto	<i>Good long sugar-cane</i>
sugar-cane good long	

Pawaian

hoj ye hapol	<i>The big new house</i>
big new house	

ye hoj hapol new big house	<i>The big new house</i>
moi ioi sųai good long sugar-cane	<i>Good long sugar-cane</i>
ioi moi sųai long good sugar-cane	<i>Good long sugar-cane</i>

2. Variation in Distribution of Pawaian Colour Slot

As has already been stated, when there is a descriptive adjective in the noun phrase, the Pawaian colour adjective follows the noun. However, if there are no descriptives then the colour adjective precedes it.

For example:

a ye yul sia my new garment red	<i>My new red garment</i>
a sia yul my red garment	<i>My red garment</i>
homi hų poi nau small dog white two	<i>Two small white dogs</i>
ma poi hų nau your white dog two	<i>Your two white dogs</i>

3. Pawaian Focus Marker

The major difference between Kuman and Pawaian noun phrases is the optional presence of a focus marker in Pawaian, and its complete absence in Kuman. A focus marker brings a focus of attention to a particular phrase in a clause. If no particular focus is required, then it is not used.

For example:

pai hanue rat ate	<i>The rat ate it</i>
mai hanua? paí pai hanue who ate? rat focus ate	<i>Who ate it? The rat did</i>

Focus is always the final slot of the phrase.

hapol pai house focus	<i>The house</i>
hoi ya howoti pai big pig many focus	<i>Many big pigs</i>
ye wo sipu nau pai new bag blue two focus	<i>The two new blue bags</i>

Noun Phrase Structure Conclusion

Thus we see that Kuman and Pawaian noun phrases both have head nouns, modified by fillers of colour, descriptive, quantity and demonstrative slots. We see that both languages have demonstratives as first in the phrase and that numerals are the last of the adjectives. Also we note that colour adjectives have the same distribution under certain conditions, and that included phrases are used as fillers of descriptive and quantity slots.

We also see that the languages differ in their noun phrases by the way Pawaian includes a focus slot, varies the distribution of the colour one and has the descriptive slot preceding the head slot, when Kuman has it after the head noun.

Formulae and Statements

The distribution of noun phrases can be summarized by tagmemic formulae and statements.

Kuman

Formula

$$N = \pm \text{Dem:dpr/ppr} + H:n \pm \text{Col:adj(c)} \pm \text{Des:Aj(d)} \pm Q:Aj(\text{num})$$

Where

N	=	Noun phrase
Dem		demonstrative slot
dpr		demonstrative pronoun
ppr		personal pronoun
H		head slot
n		noun
Col		colour slot
adj(c)		adjective denoting colour
Des		descriptive slot
Aj(d)		descriptive adjectival phrase
Q		quantity slot
Aj(num)		numeral adjectival phrase

Statement

A noun phrase consists of an optional demonstrative slot filled by a demonstrative or personal pronoun, followed by an obligatory head slot filled by a noun, followed by an optional colour slot filled by an adjective denoting colour, followed by an optional descriptive slot filled by a descriptive adjectival phrase, followed by an optional quantity slot filled by a numeral adjectival phrase.

Pawaian

Formula

$$N = \pm \text{Dem:pos.p/dm.p} \pm \text{Des:aj(d)} \mp \text{Col}_1:\text{adj(c)} + H:n \pm \text{Col}_2:\text{adj(c)} \pm Q:Aj(\text{num}) \pm \text{Foc:fm}$$

Where :

N	=	noun phrase
Dem		demonstrative slot
pos.p		possessive pronoun
dm.p		demonstrative pronoun
Des		descriptive slot
Aj(d)		descriptive adjectival phrase
Col ₁		colour slot number one
adj(c)		adjective denoting colour
H		head slot
n		noun
Col ₂		colour slot number two
Q		quantity slot
Aj(num)		numeral adjectival phrase
Foc		focus slot
fm		focus marker

Statement

A noun phrase consists of an optional demonstrative slot filled by a pronoun, followed by an optional descriptive slot filled by a descriptive adjectival phrase, followed by an optional colour slot number one filled by an adjective denoting colour, followed by an obligatory head slot filled by a noun, followed by an optional colour slot number two filled by an adjective denoting colour, followed by an optional quantity slot filled by a numeral adjectival phrase, followed by an optional focus slot filled by a focus marker.

Either a descriptive slot or a colour slot number one may occur, but both may not occur.

Either a colour slot number one or a colour slot number two may occur, but both may not occur.

DESCRIPTIVE ADJECTIVAL PHRASE

Descriptive phrases are identical in structure in both languages. They are included phrases in phrase level constructions. They are the fillers of descriptive slots.

The phrase is made up of one or more coordinate descriptive adjectives juxtaposed to one another. They describe something concerning the head noun.

For example:

Kuman

(descriptive phrase in capitals)

gag⁴ WIDA KIDAG⁴ *old soft garment*
garment soft old

yag⁴ OLT0 PODO*Tall big man*

man long big

na megakena WAKAI YABUG⁴0*My good strong bamboo**I bamboo-my good strong***Pawaian**

SAU SONAMU yul

*Old soft garment**old soft garment*

IOI MEI toi

*Big tall man**long large person*

a moi punor tapo

*My good strong bamboo**my good strong bamboo***Formula and Statement**

As the distribution is the same in both languages, the formula is also the same.

Formula

$$A(d) = + H_1:adj(d) \pm H_n:adj(d)$$

Where:

A(d) = Descriptive adjectival phrase

H₁ head slot number one

adj(d) descriptive adjective

H_n head slot n times

Statement

A descriptive adjectival phrase consists of an obligatory head slot filled by a descriptive adjective, plus a further optional number of head slots filled by descriptive adjectives.

NUMERAL ADJECTIVAL PHRASE

The numeral adjectival phrases of both languages are fillers of phrase level quantity slots. The phrases are basically the same in each language. The differences that do occur are due to differences in their respective counting systems. Pawaian has only five numeral adjectives in which it must take care of all numbering.

For example:

pomi	one
nau	two/pair
poi	another
howoti	many
neinana	all

To state any specific number above two, a Pawaian must say a series of nau which are joined by the numeral prefixial connector a, and

if it's an odd number conclude with poi joined by the same connector.

For example:

ya pomi	One pig
pig one	
ya nau	Two pigs
pig two	
ya nau apoi	Three pigs
pig two and-another	
ya nau anau anau	Six pigs
pig two and-two and-two	
ya nau anau anau anau	Nine pigs
pig two and-two and-two and-two	
apoi	
and-another	

Kuman on the other hand has a more efficient system. The numbering works in a five series, using the words for hands and feet to indicate the numbers.

For example:

suara	one
one	
suo	two
two	
suata	three
three	
suo suo	four
two two	
ogino kogŋo	five
hand across	
oguno kogŋo kogŋo	ten
hand across across	
oguno kogŋo kogŋo suara	eleven
hand across across one	
oguno katino kogŋo	fifteen
hand foot across	
oguno katino	twenty
hand foot	

When it is necessary to use numbers greater than twenty, the above are combined in order to form it.

For example:

bug⁴a oguno katino oguno katino kog⁴o suara
 pig hand foot hand foot across one
 twenty twenty five one
Thirty-six pigs

yag⁴ oguno katino oguno katino oguno kog⁴o kog⁴o
 man hand foot hand foot hand across across
 twenty twenty ten
Fifty men

The differences in Pawaian numeral phrases and those of Kuman can be illustrated by tagmemic formulae.

Pawaian

Formula

$$A(\text{num}) = + H_1:\text{adj}(\text{num}) \pm H_n:\text{adj}(\text{num})^{a-}$$

Where:

A(num)	=	Numeral adjectival phrase
H ₁		head slot number one
adj(num)		numeral adjective
H _n		head slot n times
adj(num) ^{a-}		numeral adjective with connector prefix

Statement

A numeral adjectival phrase consists of an obligatory head slot filled by a numeral adjective, plus a further optional number of head slots filled by numeral adjectives, with coordinating prefixes.

Kuman

Formula

$$A(\text{num}) = + H_1:\text{Se} \pm H_n:\text{Se}$$

Where:

A(num)	=	Numeral adjectival phrase
H ₁		head slot number one
Se		serial phrase
H _n		head slot n times

Statement

A numeral adjectival phrase consists of an obligatory head slot filled by a serial phrase, plus an optional number of other head slots filled by serial phrases.

KUMAN SERIAL PHRASE

As has already been mentioned Kuman serial phrases fill the head slots of numeral adjectival phrases. They consist of numeral adjectives and idioms which function as numerals. For examples see page 40 under the heading of numeral adjectival phrases.

Formula

$$Se = + [\pm Num_n : Idn \pm Num_1 : adj(num)]$$

Where:

Se	=	Serial phrase
Num _n		numeral slot n times
Idn		idiom denoting numbers
Num ₁		numeral slot number one
adj(num)		numeral adjective

Statement

A serial phrase consists of an optional number of numeral slots filled by idioms denoting numbers, plus an optional numeral slot number one filled by a numeral adjective. Though both tagmemes are optional, one must occur.

COORDINATE NOUN PHRASE

Coordinate noun phrases occur as allotagmas with noun phrases of subject, object, indirect object, and location clause level slots in both languages. Thus, wherever a noun phrase occurs, a coordinating noun phrase may also occur.

Coordinating phrases are distinguished by coordinators. In Kuman this is the particle *ya* and in Pawaian, the clitic *-mo*. *-mo* is suffixed to the final word in the coordinating noun phrase.

For example: Kuman

nina YA AGIRA
father-my and brother-my
My father and my brother

yag⁴ podo YA AG⁴ KEBERA
man big and dog small
The big man and the small dog

bug⁴a suara YA KUA SUO YA AG⁴ SUATA
pig one and bird two and dog three
One pig, two birds, and three dogs.

Pawaian

Apumo maumo
father-and brother-and
Father and brother

mei toimo homi hāmo
big man-and small dog-and
The big man and the small dog

ya pomimo tet naumo hā nau apoimo
pig one-and bird two-and dog two and-another-and
One pig, two birds and three dogs

The formulae and statements for the two languages are as follows:

Kuman

Formula

$$\text{CoN} = + \text{It}_1:\text{N} + \text{Co}_1:\text{ya} + \text{It}_2:\text{N} \pm (+\text{Co}_n:\text{ya} + \text{It}_n:\text{N})$$

Where:

CoN	=	Coordinate noun phrase
It ₁		item slot number one
N		noun phrase
Co ₁		coordinator slot number one
ya		coordinating particle ya
It ₂		item slot number two
Co _n		coordinator slot n times
It _n		item slot n times

Statement

A coordinate noun phrase consists of an obligatory item slot number one filled by a noun phrase, followed by an obligatory coordinator slot number one filled by the particle ya, followed by an obligatory item slot number two filled by a noun phrase, followed by an optional number of coordinator and item slots filled by the particle ya, and noun phrases respectively.

Pawaian

Formula

$$\text{CoN} = + \text{It}_1:\text{Nmo} + \text{It}_2:\text{Nmo} \pm \text{It}_n:\text{Nmo}$$

Where:

CoN	=	Coordinate noun phrase
It ₁		item slot number one
Nmo		noun phrase with clitic -mo
It ₂		item slot number two
It _n		item slot n times

Statement

A coordinate noun phrase consists of an obligatory item slot number one filled by a noun phrase containing the clitic -mo, followed by an obligatory item slot number two filled by a noun phrase

containing the clitic -mo, followed by an optional number of item slots filled by noun phrases containing the clitic -mo.

ACCOMPANIMENT PHRASE

Accompaniment phrases occur as fillers of the clause level accompaniment slot. The structure of an accompaniment phrase is identical in both languages. They consist of noun phrases or pronouns, followed by an accompaniment postposition.

For example:

Kuman

yag‡ NA BOG‡
man I with
I..... with the man

abai BUG‡A BOG‡ ogua
girl pig with went
The pig went with the girl

gak AG‡ KAMA SUO BOG‡ ebirika
boy dog black two with went
The two black dogs went with the boy

Pawaian

yala ANA POMINISOI
man I with
I..... with the man

oi YA POMINISOI nue
girl pig with gone
The pig has gone with the girl

pe opu h‡ nau pominisoi petie
boy black dog two with went
The two black dogs went with the boy

Formula

(same for both languages)

Acc = + Ax:N/pro + Rel:post

Where:

Acc	=	Accompaniment phrase
Ax		axis slot
N		noun phrase
pro		pronoun
Rel		relator slot
post		postposition

Statement

An accompaniment phrase consists of an obligatory axis slot filled by a noun phrase or pronoun, plus an obligatory relator slot filled by a postposition.

TIME PHRASE

Time phrases are identical in structure for the two languages. They occur as fillers of the clause level time slot. They consist of class one and class two time nouns, with either optional but one of them obligatory. The phrase may also have an optional numeral adjective.

For example:

Kuman

tagima	tomorrow
tomorrow	
tagima aduweri	tomorrow night
tomorrow night	
wakan aduweri suo	a fortnight tonight
week night two	

Pawaian

nei	tomorrow
tomorrow	
nei yuno	tomorrow night
tomorrow night	
yun yuno nau	fortnight tonight
week night two	

Formula

(same for both languages)

$$T = + (\pm It(t)_1 : tn_1 \pm It(t)_2 : tn_2) \pm Q:A(num)$$

Where:

T	=	Time phrase
It(t) ₁		time item slot number one
tn ₁		time noun class one
It(t) ₂		time item slot number two
tn ₂		time noun class two
Q		quantity slot
A(num)		numeral adjectival phrase

Statement

A time phrase consists of an optional time item slot number one filled by a class one time noun, followed by an optional item slot

number two filled by a class two time noun, followed by an optional quantity slot filled by a numeral adjectival phrase.

Time item slot number one and time item slot number two are both optional but one of them must occur.

Class one time nouns describe time intervals of twenty-four hours or more. Class two time nouns describe time intervals of less than twenty-four hours.

VERB PHRASE

Verb phrases are fillers of the clause level predicate slot. The Kuman phrase differs from the Pawaian one in some significant ways. These differences are found in the distribution of locatives and negatives and the function of verbs of motion.

Verbs of Motion

In Kuman, if the action of a verb involves the movement of people a motion particle is inserted into the phrase. This particle normally comes next to the verb, but if there is a clause level locational slot it comes between the motion particle and its verb.

For example:

ene edi enatinga
you motion go
You went

na ene akie suna edi peranag†ka
I you also help motion will dig
I will help you dig

na edi waile enag†ka
I motion garden will go
I will go to the garden

Pawaian on the other hand has motion particle. Verbs of motion are not formally distinguished from other verbs.

For example:

ono petie
you went

ana moilo touloe
I garden will go
I will go to the garden

Locational Slot

As well as a clause level locational slot, Kuman has also a phrase level one. This is filled by locational adverbs, which follow the verb. (As was mentioned above, the clause ones precede the verb).

Pawaian, on the other hand, has only the clause level locational slot. Adverbs, as well as noun phrases, fill this slot.

For example:

Kuman

na edi waile enagɬka
I motion garden will-go
I will go to the garden

na edi enagɬka ida
I motion will-go over there
I will go over there

Pawaian

ana moilo touloe
I garden will-go
I will go to the garden

ana weni touloe
I there will-go
I will go there

Negational slot

Both languages are capable of negating an utterance by use of a verbal suffix, a fact which will be discussed later in the morphology section. But also, Pawaian has a negative particle which fills the negational slot in a verb phrase. This slot immediately follows the verb.

For example:

Pawaian

ana moilo touloe tio
I garden will-go not
I will not go to the garden

or

ana moilo touloɬi
I garden will-not-go
I will not go to the garden

Kuman

na edi waile pikiragɬka
I motion garden will-not-go
I will not go to the garden

Modifying slot

The one distributional feature that both languages share, is the position of the modifying slot. It occurs as the first slot in the phrase.

For example:

Kuman

na tabire edi waile enagka
I quickly motion garden will-go
I will go to the garden quickly

Pawaian

ana moilo tui touloe
I garden quickly will-go
I will go to the garden quickly

Verb phrase formulae and statements

Kuman

$V = \pm M:adv \pm Mob:mb [...] + H:v \pm L:l.adv.$

Where:

V	=	Verb phrase
M		modifier slot
adv		adverb
Mot		motion slot
mt		motion particle
[...]		inclusion of non-phrase element
L		location slot
ladv		location adverb
H		head slot
v		verb

Statement

A verb phrase consists of an optional modifier slot filled by an adverb followed by an optional motion slot filled by a motion particle, followed by an obligatory head slot filled by a verb, followed by an optional location slot filled by a locative adverb.

A locational clause level slot may be inserted between the motion slot and the head slot.

Pawaian

Formula

$V = \pm M:adv + H:v \pm Neg:ng$

Where:

V	=	Verb phrase
M		modifier slot
adv		adverb
H		head slot
v		verb
Neg		negative slot
ng		negative particle

Statement

A verb phrase consists of an optional modifier slot filled by an adverb followed by an obligatory head slot filled by a verb followed by an optional negation slot filled by a negative particle.

MORPHOLOGICAL COMPARISONS

A comparison of the morphological structure of the two languages will now be made to see if there are any significant similarities or differences. The different parts of speech will be considered as units and will be dealt with separately.

VERB STRUCTURE

Verbs are fillers of verb phrase head slots. Morphologically verbs are more complex than any other part of speech in either language. Therefore, in order to compare them adequately each feature will be considered separately.

Aspect

A shared feature of Kuman and Pawaian which is quite significant in terms of relationship, is the fact that both languages divide the universe up into two aspects rather than the three or more tenses, usually found. These aspects show similarity to the English dichotomy of perfect versus imperfect. The point of attention concerns whether an action is completed or not.

Thus,

I was looking

I am looking

I will be looking

are all spoken the same way. In Kuman this would be NA KANAG+KA. In Pawaian the form would be ANA HETULOE.

The perfect form gives the same meaning as the English past tense. For example:

Kuman

na kaniga

I saw

Pawaian

ana hetoe

I saw

Question marker

Another shared feature of the two languages is found in the way a statement is turned into a question. A final order suffix is used. In Kuman it is -o, and in Pawaian it is -a.

For example:

Kuman

kanag+ka

(I) am seeing

kanag+o

Am (I) seeing

kaniga	(I) saw
kanio	did (I) see

Pawaian

hetuloe	(I) am seeing
hetuloa	Am (I) seeing
hetoe	(I) saw
hetoa	did (I) see

Indicative marker

As well as the question marker filling the final order suffixal slot, an indicative marker also fills that slot. In Kuman this is {-ka} ~ (-ga ~ -ika) ∞ (k-a ~ g-a)⁶ and -e in Pawaian.

The allomorphs -ika ~ -ka ~ -ga, in Kuman are phonemically defined:

- ka following a voiceless consonant
- ika following [ʔ]
- ga following vowels or nasals.

-k-a ~ -g-a are phonemically defined in reference to each other, but are grammatically defined in reference to the other allomorphs.

- k-a occurs following a voiceless consonant
- g-a occurs following a nasal or a vowel
- k-a ~ -g-a occurs in words containing 2nd/3rd plural marker.

To illustrate the final order suffixes and the various allomorphs of Kuman a paradigm of the perfect and imperfect indicative of the final verb will now be given. The Pawaian paradigm will also be given, so that it can be used for reference purposes in the studies that are to come.

Kuman

Perfect Indicative

(indicative marker is in capitals)

na	kaniGA	I saw
ene	kaninGA	You saw
ye	kanuGA	He saw
no	kabugKA	We two saw
ene	kaburiKA	You two saw
ye	kaburiKA	They two saw
no	kamuGA	We saw
ene	kaniGuA	You saw
ye	kaniGuA	They saw

Imperfect Indicative

na	kanag4KA	<i>I will see</i>
ene	kanatinGA	<i>You will see</i>
ye	kanabuKA	<i>He will see</i>
no	kanabug4KA	<i>We two will see</i>
ene	kanaburika	<i>You two will see</i>
ye	kanaburika	<i>They two will see</i>
no	kanamGA	<i>We will see</i>
ene	kanag4KuA	<i>You will see</i>
ye	kanag4KuA	<i>They will see</i>

Pawaian

Perfect Indicative

ana	hetoE	<i>I saw</i>
ono	hetiE	<i>You saw</i>
á	henuE	<i>He saw</i>
nono	hetiE	<i>We saw</i>
ono	hetiE	<i>You saw</i>
á	hetiE	<i>They saw</i>

Imperfect Indicative

ana	hetuloE	<i>I will see</i>
ono	henaie	<i>You will see</i>
á	hetesyE	<i>He will see</i>
nono	henaie	<i>We will see</i>
ono	henaie	<i>You will see</i>
á	henaie	<i>They will see</i>

Negative Suffix

An interesting feature of Pawaian is revealed in the analysis of the final order suffix of the verb. For in this language, the negative fills the same slot as the indicative and the question suffixes. Thus we have the concept of negation in opposition to that of statement and question. You either state a concept, negate it or question it. You do not ask a question in the negative, as in the English question *Didn't you go?*

Kuman on the other hand has its negative suffix in a different order from the statement/question complex and is therefore able to ask a question in the negative. The Kuman negative suffix in the final form of the verb is {-kir} -kir ~ -kit

-kit preceding IN

-kir elsewhere

In Pawaian the suffix is -ai.

For Example:

(question and negative markers are in capitals)

Kuman

ye kanugua	<i>He saw</i>
ye kanKIRukua	<i>He didn't see</i>
ye kanm0	<i>Did he see?</i>
ye kanKIRim0	<i>Didn't he see?</i>

Pawaian

á henue	<i>He saw</i>
á henuAl	<i>He didn't see</i>
á henuA	<i>Did he see?</i>

Other Obligatory Suffixes

A major difference between the two languages is found in the remaining obligatory suffixes. In Pawaian this signifies aspect and in Kuman it signifies person/number. Person/number only occurs in Pawaian in first and third singular stative forms and will be considered later. Aspect in Kuman only occurs with imperfect forms and will also be considered later.

Kuman Number/person Suffixes

The Kuman number/person suffixes have a considerable number of phonemically defined allomorphs, so before analyzing the morphemic structure, a list of pertinent morphophonemic rules will be given first.

1. A vowel between g^h and k is lost.
2. When b follows g^h both are lost.
3. When m follows g^h both are lost.
4. g^h preceding n becomes t.
5. When two vowels come together the former is lost.
6. Assimilation takes place when a nasal precedes a prenasalized stop. Either the nasal is lost or it displaces the prenasalization.
7. g^h following g^h is lost.

There are also a good number of grammatical allomorphs among the person/number morphemes. The grammatical allomorphs are determined by the grammatical function of adjoining suffixes.

The Suffixes

1st Person singular number:

{g^h} (-i ~ -Ø) + -g^h

na kaniga *I saw*

na kan- -i -ga

I stem 1st sg. indic. marker

na kanag⁴ka *I will see*

na kan- -a -g⁴ -ka
I stem aspect 1st/sg. indic.

na pag⁴ka *I peeled*

na pag⁴- -Ø -ka
I stem 1st/sg. indic.

2nd Person singular number:

{-in} -in + -tin + Ø

ene kaninga *You saw*
 ene kan- -in -ga
You stem 2nd/sg. indic.

ene kanatinga *You will see*
 ene kan- -a -tin -ga
You stem aspect 2nd sg. indic.

ene kano *Did you see?*
 ene kan- -Ø -o
You stem 2nd/sg. question

3rd Person singular number:

{-u-u} -Ø-u ∞ (-u-u ~ -Ø-u) + (-b ~ -bu) + -m

ye kangua *He saw*

ye kan- $\overleftarrow{-g \quad -u \quad -a}$
he stem indic.....3rd/sg.....indic

ye kanugua *He saw*

ye kan- -u $\overleftarrow{-g \quad -u \quad -a}$
he stem 3rd/sg3rd/sg indic
 indic indic

ye pag⁴kua *He peeled*

ye pag⁴- -Ø $\overleftarrow{-k \quad -u \quad -a}$
he stem 3rd/sg3rd sg
 indic.....indic

ye kanabuka *He will see*

ye kan- -a -bu -ka
he stem aspect 3rd/sg indic

ye kanabo *Will he see?*

ye kan- -a -b -o
he stem aspect 3rd/sg question

ye kanmo *Did he see?*

ye kan- -m -o
he stem 3rd/sg question

1st Person dual number:

{bug†-} -bug† ~ -ug† + -ug†

no kabug†ka *We two saw*

no ka- -bug† -ka
we stem 1st/dl indic

no kanabug†ka *We two will see*

no kan- -a -bug† -ka
we stem aspect 1st/dl indic

no paug†ka *We two peeled*

no pa- -ug† -ka
we stem 1st/dl indic

no kankug†ka *We two didn't see*

no kan- -k -ug† -ka
we stem neg 1st/dl indic

2nd/3rd Person dual number:

{-buri} (-buri ~ -uri) + -uri

ene/ye kaburika *You/they two saw*

ene/ye ka- -buri -ka
you/they stem 2nd/3rd dl indic

ene kanaburika *You two will see*

ene kan- -a -buri -ka
you stem aspect 2nd/3rd/dl indic

ene paurika *You two peeled*

ene pa- -uri -ka
you stem 2nd/3rd dl indic

ene kankiurika *You didn't see*

ene kan- -ki -uri -ka
you stem neg 2nd/3rd dl indic

1st Person plural number:

{-mun} [(-mu ~ -un) ∞ -m] + (-mun ~ -un) + -un + -m

no kankunga *We didn't see*

no kan- -k -un -ga
we stem neg 1st/pl indic

no kamga *We saw*

no ka- -m -ga
we stem 1st/pl indic

	no	kamuga		<i>We saw</i>
no	ka-	-mu	-ga	
<i>we</i>	stem	1st/pl	indic	

	no	kanamga		<i>We will see</i>
no kan-	-a	-m	-ga	
we stem	aspect	1st/pl	indic	

no kanamuno *Will we see?*
no kan- -a -mun -o
we stem aspect 1st/pl question

no paunga *We peeled*
no pa- -un -ga
we stem 1st/pl indic

no kankiramga *We will not see*
no kan- -kir -a -m -ga
we stem neg aspect 1st/pl indic

no kankiramuno *Won't we see?*
no kan- -kir -a -mun -o
we stem neg aspect 1st/pl question

no kankuno *Didn't we see?*
no kan- -k -un -o
we stem neg 1st/pl question

no kamuno *Did we see?*
no ka- -mun -o
we stem 1st/pl question

2nd/3rd Person plural number:

$$\{-g^4um\} = -g^4um + (-g^4 - u \sim -\emptyset - u) + -i - u + -m$$

	ene kanag ⁴ umo	<i>Will you see?</i>
ene kan-	-a -g ⁴ um	-o
<i>you stem</i>	aspect 2nd/3rd/pl	question

ye kanag+kua *They will see*

ye kan- -*a* *-gə* ↓ *-k* *-u* *-a* ↓
he stem aspect 2nd/3rd/pl.....2nd/3rd/pl
 indic.....indic

ye pag+kua They will peel

ye p- -a -g -k -u -a ↓
 they stem aspect 2nd/3rd/pl 2nd/3rd/pl
 indic indic

	ye	kanigua		<i>They saw</i>
	ye	kan-	-i	↑ -g -u -a ↓
	they	stem	2nd/3rd/pl.....2nd/3rd/pl	
			indic.....indic	
		ye	kankirumo	<i>Didn't they see?</i>
	ye	kan-	-kir -um	-o
	they	stem	neg 2nd/3rd/pl	question
		ye	kankirag ^g umo	<i>Won't they see?</i>
	ye	kan-	-kir -a	-g ^g um -o
	they	stem	neg aspect 2nd/3rd/pl	question
		ye	kankirikua	<i>They didn't see</i>
	ye	kan-	-kir -l	↑ -k -u -a ↓
	they	stem	neg 2nd/3rd/pl.....2nd/3rd/pl	
			indic.....indic	
		ye	kanmo	<i>Did they see?</i>
	ye	kan-	-m	-o
	they	stem	2nd/3rd/pl	question

Kuman Person/number Allomorphs Summarized

The following summary explains the allomorphic variation of the person/number morphemes of the Kuman final verb.

1st Person singular:

- {-i} (-i ~ Ø) + g^g
 - g^g following aspect suffix
 - l ~ Ø elsewhere
 - Ø between g^g and k
 - i elsewhere

2nd Person singular

- {-in} -in + -tin + -Ø
 - tin following aspect suffix
 - Ø preceding interrogative providing it is not imperfect
 - in elsewhere

3rd Person singular:

- {-bu} (-b ~ -bu) + [(-u-u ~ -Ø-u) ∞ -Ø-u] + -m
 - m preceding interrogative suffix
 - b ~ -bu following aspect suffix
 - b preceding vowels
 - bu preceding consonants

-u-u ~ -Ø-u ∞ -Ø-u elsewhere
 -Ø-u occurs with sub-class of verbs as
 an optional form
 -u-u ~ -Ø-u occurs elsewhere
 -Ø-u following stems ending in g[‡]
 -u-u elsewhere

1st Person dual:

{-bug[‡]} (-bug[‡] ~ -ug[‡]) + -ug[‡]
 -ug[‡] following negative suffix
 -bug[‡] ~ -ug[‡] elsewhere
 -ug[‡] following an apocopated stem in
 which the final g[‡] is lost
 -bug[‡] elsewhere

2nd/3rd Person dual:

{-buri} (-buri ~ -uri) + -uri
 -uri following a negative suffix
 -buri ~ -uri elsewhere
 -uri following an apocopated stem in which
 the final g[‡] is lost
 -buri elsewhere

1st Person plural:

{-mun} [(-mu ~ -un) ∞ -m] + -mun + -un + -m
 -un following a negative suffix
 -m between aspect and indicative suffixes
 -mun preceding an interrogative suffix when there
 is no contiguous negative suffix
 -mu ~ -un ∞ -m elsewhere
 -m occurs with sub-class of verbs as an
 optional form
 -mu ~ -un occurs elsewhere
 -un following an apocopated stem in
 which the final g[‡] is lost
 -mu occurs elsewhere

2nd/3rd Person plural:

{-g[‡]um} -g[‡]um + -g[‡]-u + -l-u + (-m ~ -um) + -um
 -g[‡]um between aspect and interrogative suffix
 -g[‡]-u between aspect and indicative suffixes
 -um between negative and interrogative suffixes

- m ~ -um between stem and interrogative suffixes
- um following g†
- m elsewhere
- i-u occurs elsewhere

Pawaian Aspect Suffixes

As has been stated the Pawaian Aspect suffixes are obligatory and so will be discussed now. Kuman aspect will be discussed with the optional affixes.

There are two aspects in Pawaian, perfect or complete, and imperfect or incomplete action.

Perfect Aspect

{-i} -i in all positions

ono	hetie		<i>You saw</i>
ono	het-	-i -e	
you	stem	perf	statement
nono	petie		<i>We went</i>
nono	pet-	-i -e	
we	stem	perf	statement

Imperfect Aspect

{-ai} -ai in all positions

ono	henaie		<i>You are seeing</i>
ono	hen-	-ai -e	
you	stem	imperf	statement
nono	penaie		<i>We are going</i>
nono	pen-	-ai -e	
we	stem	imperf	statement

There is further complication in aspect, inasmuch as there are four portmanteau morphemes which include aspect as one of the meanings. They also have the meaning of person, number and of being stative. They are as follows:

1st Person, singular, perfect, stative

{-o} -o in all positions

ana	hetoe		<i>I saw</i>
ana	het-	-o -e	
I	stem	1st/sg perf/stative	statement

3rd Person, singular, perfect, stative:

{-ɥ} -ɥ in all positions

á henue *he saw*

á hen- -ɥ -e
he stem 3rd/sg statement
 perf/stative

1st Person, singular, imperfect, stative:

{-ulo} -ulo in all positions

ana hetuloe *I am seeing*

ana het- -ulo -e
I stem 1st/sg statement
 imperf/stative

3rd Person, singular, imperfect, stative:

{-esɥ} -esɥ in -sɥl positions

-esɥ following consonants

-sɥ following vowels

á hetesɥe *He is seeing*

á het- esɥ- -e
he stem 3rd/sg statement
 imperf/stative

á nawasɥe *He is hitting*

á nawa- sɥ- -e
he stem 3rd/sg statement
 imperf/stative

Obligatory Suffixes Summary

The following formulae summarize the obligatory slots found in the verb.

Kuman

+ Stem + Number/person + Declarative

Pawaian

+ Stem + Aspect + Declarative

Optional Suffixes of the Final Verb

As well as the obligatory parts of the verb, there are also several optional affixes which may be used to modify or add meaning to the verb. In Pawaian these affixes indicate non-immediate future, and intensity. In Kuman they indicate negation, aspect and intensity.

Pawaian Optional Suffixes

Non-immediate Future

If an action is to be done later than in the immediate future the first order suffix -u is inserted next to the stem.

For example:

omol henaie	<i>They will look</i>
omol hen- -ai -e	
<i>those-men</i> stem imperf	statement
omol henuaie	<i>They will look later</i>
omol hen- -u -ai -e	
<i>those-men</i> stem future imperf	statement

Intensity

An action with intensity is indicated by the suffix -ɛi, which is inserted just prior to the declarative slot. When this suffix is used a different English verb often makes a better translation of the Pawaian.

For example:

toi hetie	<i>The man has seen it</i>
toi het- -i -e	
<i>man</i> stem perf	statement
toi hetieɛie	<i>The man has inspected it</i>
toi het- -i -ɛi -e	
<i>man</i> stem perf intens	statement
toi ewie	<i>The man has stopped</i>
toi ew- -i -e	
<i>man</i> stem perf	statement
toi ewieɛie	<i>The man is staying</i>
toi ew- -l -ɛi -e	
<i>man</i> stem perf intens	statement

Kuman Optional Suffixes

Aspect

As it stands, the verb is in the perfect aspect. If the action is to be in the state of imperfection then it is required to include the suffix -a before the person/number morpheme.

For example:

no kabug ⁴ ka	<i>We saw</i>
no ka- -bug ⁴ -ka	
we stem 1st/dl indic	
no kanabug ⁴ ka	<i>We will see</i>
no kan- -a -bug ⁴ -ka	
we stem imperf 1st/dl indic	
ye eburo	<i>Did they go?</i>
ye e- -bur -o	
they stem 3rd/dl question	
ye enaburo	<i>Will they go?</i>
ye en- -a -bur -o	
they stem imperf 3rd/dl question	

Negation

To negate any action, the suffix -kir is placed next after the stem of the verb. -kir has both phonemically defined and grammatically defined allomorphs.

- {-kir} (-kir ~ -kit) + -ki + -k
- ki preceding 2nd/3rd dual suffix
- ki preceding 1st dual and plural suffixes
- kir ~ -kit elsewhere
- kit preceding in
- kir elsewhere

For example:

na kankirika	<i>I didn't see</i>
na kan- -kir -i -ka	
I stem neg 1st/sg indic	
na kankirag ⁴ ka	<i>I will not see</i>
na kan- -kir -a -g ⁴ -ka	
I stem neg imperf 1st/sg indic	
ene kankitinga	<i>You didn't see</i>
ene kan- -kit -in -ga	
you stem neg 2nd/sg indic	
no kankug ⁴ ka	<i>We two don't see</i>
no kan- -k -ug ⁴ -ka	
we stem neg 1st/dl indic	

ye kankiurika *They two didn't see*
ye kan- -ki -uri -ka
they stem neg 2nd/3rd/dl indic

Intensity

Kuman, like Pawaiian, intensifies the meaning of an action by the use of a special suffix. In this case it is the suffix -er which comes between the consonant and vowel of the indicative suffix {-ka}.

For example:

na pepa kaniga *I saw the paper*
na pepa kan- -i -ga
I paper stem 1st/sg indic

na pepa kanigera I studied the paper

na pepa kan- -i ↓ -g -er -a ↓
I paper stem 1st/sg intens indic.....indic

ye bugʼa dokonabuka *He will find the pigs*

ye bugʼa dokon- -a -bu -ka

He pig stem imperf 3rd/sg indic

ye bugʔa dokonabukera He will search out
the pigs

ye bugʔa dokon- -a -bu -k -er -a
He pig stem imperf 3rd/sg indic indic

Order of Final Verb Affixes

The following formulae and statements will show the respective orders of the final verb suffixes, and will summarize what has been discussed in detail.

Kuman

Formula and Statement

$$fv = + \text{nuc:va} \pm \text{neg:neg} \pm \text{asp:imp} + \text{nu/pers:nu/pers} \pm \text{int:int} + \text{dec}$$

That is, a final form verb consists of an obligatory nuclear slot filled by a verb stem, an optional negative slot filled by a negative suffix, an optional aspect slot filled by an imperfect aspect suffix, an obligatory number/person slot filled by a number/person suffix, an optional intensifier slot filled by an intensifier suffix, and an obligatory declarative slot filled by a declarative suffix.

Pawaian

Formula and Statement

fv = +nuc:vs ± fut:fut + Asp:asp ± int:int + dec:dec

That is, a final form verb consists of an obligatory nuclear slot filled by a verb stem, an optional future slot filled by a future suffix, an obligatory aspect slot filled by an aspect suffix, an optional intensity slot filled by an intensity suffix, and an obligatory declarative slot filled by a declarative suffix.

THE MEDIAL FORM VERB

The verb endings given so far have been attached to the final verb in a sentence. However, when a verb is in a non-final clause it takes different endings. At least in Kuman it does. In Pawaian the only difference is that a statement suffix may be left off on the medial verb.

For example:

(medial verbs are in capitals)

á nue He has gone
he gone

á NU hetesye He has gone to eat
he gone will-eat

toi salli hanue The man ate sweet potato
man sweet-potato ate

toi sali HANU pe The boy ate sweet potato with
man sweet-potato ate boy the man
pominisoi hanue
with ate

In Kuman as has been said, the medial verb takes various different sets of endings, depending on whether there is more than one subject involved and in what type of clause the medial verb is situated.

Verb in Independent Medial Clause

(a) Subjects the Same

When the subject in both clauses is the same and the actions are simultaneous or in quick succession, the sentence medial verb simply consists of the verb stem.

For example:

na PI kaniga I went and saw
I went saw

ye KATE durukua He talked and sang
he talked sang

If the action of the second clause follows that of the first in a normal sequence of events, then the sequential suffix *-tire ~ -dire* is added to the stem of the medial verb.

For example:

ye kua KADIRE ye sugua He saw, and then shot
he bird saw he shot the bird

ye pepa kiurita BOLTIRE ye He wrote a little and
he paper little wrote he then went home

ede ugug[†] egua
motion home went

(b) *Subjects different*

When there are different subjects in two or more coordinate clauses the medial verb takes the same suffixes as the final form of the verb, except that there is no aspect slot, and the filler of the declarative slot is different. This filler functions as a medial declarative suffix. It takes the form *-o*. This perhaps can best be illustrated by a paradigm, so the medial form of *kan to see* will be given. This will be followed by some examples, using this form in sentences.

Coordinate Medial Verb with Different Subjects

kan to see

	Stem	Pers/num	med/ declarative	
na kanigo	kan-	-I	-go	I see, saw, will see
ene kanningo	kan-	-in	-go	You see, saw, will see
ye kanuguo	kan-	-u...-u	-g..o	He saw, sees, will see
no kabug [†] ko	kan-	-bug [†]	-ko	We two saw, see, will see
ene/ye kaburiko	kan-	-bur	-iko	You/they saw, see, will see
no kamugo	ka-	-mu	-go	We saw, see, will see
ene/ye kaniguo	kan-	-i..u	-g..o	You/they saw, see, will see

For example:

ye kobug[†]o puksuguo kaniga He threw the stone and I saw it
he stone threw saw-I

na kankiriko kua edugua I didn't see the bird so it
I not-see bird went got away

ene engo pikirag[†]ka You will go and they won't
you go they-will-not-go

Coordinate verb Formulae

Co.m.v₁ = + nuc:vs ± seq:seq

Type one coordinate medial verb consists of an obligatory nuclear slot filled by a verb stem, and an optional sequential slot filled by a sequential suffix.

Co.m.v₂ = + nuc:vs ± neg:neg + n/p:n/p ± int:int + dec:m.dec

A type two coordinate medial verb consists of an obligatory nuclear slot filled by a verb stem, an optional negative slot filled by a negative suffix, an obligatory number/person slot filled by a number/person suffix, an optional intensifier slot filled by an intensifier suffix, and an obligatory declarative slot filled by a medial declarative suffix.

The Dependent Medial Verb

When the medial verb is in a dependent clause it has a special set of suffixes. These indicate dependency, person, number, and negation. The declarative slot is missing in this particular set of endings. It is possible to see the likeness between the person/number morpheme of the final verb and part of the endings of most of the dependent verb forms, but an attempt to separate out a morpheme indicating dependency from the person/number suffixes leaves one with such a complicated set of grammatical allomorphs that it is far simpler to postulate portmanteau morphemes for all of the positive endings.

To illustrate this, the suffixes will be shown in paradigmatic form. Then the difficulties of setting up a separate dependent indicating morpheme will be shown, and finally, the negative and portmanteau morphemes will be described.

Dependent Medial Verb Conjugation

Positive of kan to see

1st sg	kanibo	<i>While I was looking</i>
2nd sg	kanin	<i>While you were looking</i>
3rd sg	kanan	<i>While he was looking</i>
1st dl	kanobug†	<i>While we two were looking</i>
2nd/3rd dl	kaniburi	<i>While you/they two were looking</i>
1st pl	kanomun	<i>While we were looking</i>
2nd/3rd pl	kanibi	<i>While you/they were looking</i>

Negative of kan to see

1st sg	kankiribo	<i>When I wasn't looking</i>
2nd sg	kankitin	<i>When you weren't looking</i>
3rd sg	kankiran	<i>When he wasn't looking</i>
1st dl	kankug†	<i>When we two weren't looking</i>

2nd/3rd dl	kankiuri	<i>When you/they two weren't looking</i>
1st pl	kankun	<i>When we weren't looking</i>
2nd/3rd pl	kankiribi	<i>When you/they weren't looking</i>

Suffixes of Dependent and Final Verbs Compared

	Dependent		Final
	Positive	Negative	
1st sg	-ibe	-kiribi	-iga
2nd sg	-in	-kitin	-inga
3rd sg	-an	-kiran	-ugua
1st dl	-obug†	-kug†	-bug†ka
2nd/3rd dl	-iburi	-kiuri	-buri
1st pl	-omun	-kun	-muga
2nd/3rd pl	-ibi	-kiribi	-igua

If one only considers the positive form of the verb, it is possible to claim that the initial vowel of the verb endings is the dependent indicating morpheme, and that it is manifested by three grammatical allomorphs:

- o with 1st dual and plural
- a with 3rd singular
- i with 1st singular, 3rd dual and plural, and all of 2nd person

For example:

	stem	dependency	pers/num	
na kanibo	kan-	-i	-bo	<i>When I see</i>
ene kanin	kan-	-i	-n	<i>When you see</i>
ye kanan	kan-	-a	-n	<i>When he sees</i>
no kanobug†	kan-	-o	-bug†	<i>When we two see</i>
ene/ye kaniburi	kan-	-i	-buri	<i>When you/they see</i>
no kanomun	kan-	-o	-mun	<i>When we see</i>
ene/ye kanibi	kan-	-i	-bi	<i>When they see</i>

However, when the endings which are found with the negative are also taken into account there are problems which have to be faced. The dual number and the 2nd and 3rd dual number endings do not have these postulated dependency allomorphs. In fact the whole endings apocope. The negative is reduced to -k or -ki, and the person/number suffix loses its initial consonant. It is then this apocopation that indicates the dependency of the verb. Therefore, rather than try to describe a dependent indicating morpheme in terms of loss and reduction of neighbouring morphemes, it is more practical to postulate a portmanteau morpheme which has the meaning of dependency, together with person and number.

Dependent Portmanteau Morphemes

The dependent portmanteau morphemes of the Kuman medial verb, indicate dependency, person, and number. They are indicated as follows:

1st Person, singular, dependent:

{-ibo} -ibo
 na kanibo *When/because/if I saw*
 kan- -ibo
 stem 1st/sg/dep
 na ukiribo *When I didn't come*
 u- -kir -ibo
 stem neg 1st/sg/dep
 ye ene KANKIRIBI ye bugta kunolugua
he you didn't-see he pig stole
Because you didn't see him, he stole the pig

2nd Person, singular, dependent:

{-in} -in
 ene kanin *Because you saw*
 kan- -in
 stem 2nd/sg/dep
 ene ukitin *As you didn't come*
 u- -kit -in
 stem neg 2nd/sg/dep
 ene edi EN na bugta toporagka
you motion go I pig will-trade
If you go I will buy the pig

3rd Person, singular, dependent:

{-an} -an ~ -nan
 -an following a consonant
 -nan following a vowel
 ye kankiran *When he didn't see*
 kan- -kir -an
 stem neg 3rd/sg/dep
 ye unan *When he came*
 u- -nan
 stem 3rd/sg/dep

gak pepa boran nono edi ugug⁴ enabug⁴ka
 boy paper write we motion home will-go
 When the boy has written on the paper we two will go

1st Person, dual, dependent:

{-obug⁴} {-obug⁴ ~ -bug⁴} + -ug⁴

-ug⁴ following a negative suffix

-obug⁴ -bug⁴ elsewhere

-bug⁴ following a back vowel

-obug⁴ elsewhere

no kanobug⁴ Because we two see

kan- -obug⁴

stem 1st/dl/dep

no ubug⁴ Because we came

u- -bug⁴

stem 1st/dl/dep

no kankug⁴ Because we two didn't see

kan- -k -ug⁴

stem neg 1st/dl/dep

nono edi meda obug⁴ ye akie endogua

we motion outside went he also went

When we went outside, he went out too

2nd/3rd Person, dual, dependent:

{-iburi} {-iburi ~ -buri} + -uri

-uri following negative suffix

-iburi ~ -buri elsewhere

-buri following back vowels

-iburi elsewhere

ene kaniburi If you two see

kan- -iburi

stem 2nd/3rd/dl/dep

ene uburi If you two come

u- -buri

stem 2nd/3rd/dl/dep

ene kankiuri If they two don't come

kan- -ki -uri

stem neg 2nd/3rd/dl/dep

nono nig⁴kuba kiurita siburi ye ugug⁴ edogua
we swim little performed he home went
While we swam a little he went home.

1st Person, plural, dependent:

{-omun} (-omun ~ -mun) + -un
 -un following negative suffix
 -omun ~ -mun elsewhere
 -mun following back vowels
 -omun elsewhere

nono kanomun *When we saw*

kan- -omun
 stem 1st/pl/dep

no umun *When we come*

u- -mun
 stem 1st/pl/dep

no kankun *When we didn't come*

kan- -k -un
 stem neg 1st/pl/dep

nono kopi urakun masita edugua
we coffee not-picking white-man came
When we weren't picking the coffee the white-man came

2nd/3rd Person, plural, dependent:

{-ibi} -ibi ~ -bi
 -bi following back vowels
 -ibi elsewhere

ye kanibi *As they saw*

kan- -ibi
 stem 2nd/3rd/pl/dep

ye ubi *As they come*

u- -bi
 stem 2nd/3rd/pl/dep

ye eibi gak dirag⁴orukua
they gone child play
While they are gone the child is playing

The Negative Suffix in the Dependent Verb

The rules that applied to the negative in the final form of the

verb also apply to the dependent verb, so that a quick reference back to the discussion on page 52 is all that need be done here.

For example:

```
{-kir} (-kir ~ -kit) + -ki + -k
    -ki precedes the 2nd/3rd dual suffix
    -k  precedes 1st dual and plural suffixes
    -kir ~ -kit occurs elsewhere
        -kit before -in
        -kir elsewhere
```

For example:

```
ene kankiuri      While you two weren't looking
kan- -ki -uri
stem neg 2nd/3rd/dl/dep

no kankun         While we weren't looking
kan- -k -un
stem neg 1st/pl/dep

ene kankitin      While you weren't looking
kan- -kit -in
stem neg 2nd/sg/dep

ene kankiribi     While you weren't looking
kan- -kir -ibi
stem neg 2nd/3rd/pl/dep
```

THE NOUN

Nouns are fillers of head slots in noun phrases and of item slots in time phrases. In both languages nouns carry suffixes to verbalize the noun in statements and questions. The languages differ inasmuch as Kuman has possessive suffixes and Pawaian has negatives and copulas as suffixes.

Noun Classes

The main difference between the two noun systems is concerned with the presence of two noun classes which occur in Kuman, but not in Pawaian. These classes are based on the obligatory or optional presence of possessive suffixes. One class of nouns can stand as free-form morphemes, but the other must always be possessed. This second class is made up of body parts and kinship terms. Pawaian has no possessed nouns.

For example:

Obligatorily Possessed

na nina	<i>my mother</i>
na bitina	<i>my head</i>
I head-my	
na agera	<i>my brother</i>
I brother-my	
na oguna	<i>my hand</i>
I hand-my	

Optionally Possessed

agɬ	<i>dog</i>	agɬina	<i>my dog</i>
ugugɬ	<i>house</i>	ugugɬina	<i>my house</i>
gak	<i>boy</i>	gakina	<i>my boy</i>

Pawaian One Class

mu	<i>head</i>	a mu	<i>my head</i>
mau	<i>brother</i>	a mau	<i>my brother</i>
nemi	<i>hand</i>	a nemi	<i>my hand</i>
hapol	<i>house</i>	a hapol	<i>my house</i>

Kuman Suffixes

1. Possessive Suffixes

The Kuman possessive suffix is complicated by the number of morphemically defined allomorphs which occur with the third person singular possessive. The first person singular has two such allomorphs.

1st Person, singular, possessive suffix:

{-na}	-na ∞ -ra
	-na with class 1 and classes 2a, 2b, 2c and 2d nouns
	-ra with class 2e nouns

For example:

na bawana	<i>my uncle</i>
bawa-	-na
stem	<i>my</i>
na dirabina	<i>my tongue</i>
dirabi-	-na
stem	<i>my</i>

na nina *my father*
 ni- -na
 stem *my*

na yobura *my bone*
 yobu- -ra
 stem *my*

na abara *my sister*
 aba- -ra
 stem *my*

2nd Person, singular, possessive suffix:

{-n} -n ∞ -tin
 -n with class 1 and classes 2a, 2b,
 2c, and 2d nouns
 -tin with class 2e nouns

ene bawan *your uncle*
 bawa- -n
 stem *your*

ene dirabin *your tongue*
 dirabi- -n
 stem *your*

ene abatin *your sister*
 aba- -tin
 stem *your*

3rd Person, singular, possessive suffix:

{-mo} -mo ∞ -m ∞ -no ∞ -ie ∞ -ugɔ
 -mo with class 1 and class 2a nouns
 -m with class 2b nouns
 -no with class 2c nouns
 -ie with class 2d nouns
 -ugɔ with class 2e nouns

For example:

Class 1 nouns

ye konbomo *his dog*
 konbo -mo
 stem *his*

ye dikirimo *his corn*
 dikiri -mo
 stem *his*

Class 2a nouns

ye	nem	<i>his father</i>
ne-	-m	
stem	<i>his</i>	
ye	bawamo	<i>his uncle</i>
bawa-	-mo	
stem	<i>his</i>	
ye	mokumo	<i>his back</i>
moku-	-mo	
stem	<i>his</i>	

Class 2b nouns

ye	nem	<i>his father</i>
ne-	-m	
stem	<i>his</i>	
ye	gawam	<i>his nephew</i>
gawa-	-m	
stem	<i>his</i>	

Class 2c nouns

ye	dirano	<i>his lips</i>
dira-	-no	
stem	<i>his</i>	
ye	gumano	<i>his nose</i>
guma-	-no	
stem	<i>his</i>	

Class 2d nouns

ye	dirabie	<i>his tongue</i>
dirab-	-ie	
stem	<i>his</i>	
ye	wie	<i>her husband</i>
w-	-ie	
stem	<i>his</i>	

Class 2e nouns

ye	abaugto	<i>his sister</i>
aba	-ugto	
stem	<i>his</i>	

ye ogomugto his eye
 ogom- -ugto
 stem his

1st/2nd/3rd Person, plural, possessive suffix:

{-no} -no ∞ -ro
 -no with class 1 and class 2a, 2b,
 2c and 2d nouns
 -ro with class 2e nouns

no bawano our uncle

bawa- -no
 stem our

ene nino your father

ni- -no
 stem your

ye yoburo their bones

yobu- -ro
 stem their

2. Noun Verbalizing Suffixes

Kuman has two verbalizing suffixes, one indicates a statement, and the other a question.

Statement verbalizing suffix : {-kira}

Question verbalizing suffix: {-ino}

For example:

ene yagtkira You are a married man

yagtkira -kira
 stem verbalizer

ye agtkira It is a dog

agtkira -kira
 stem verbalizer

ene yagtkino? Are you a married man?

yagtkino -ino
 stem verbalizer

ye agtkino? Is it a dog?

agtkino -ino
 stem verbalizer

Pawaian Suffixes

1. Noun declarative suffixes

The three declarative suffixes that occur with verbs, also occur with nouns. When attached to nouns they either state a fact, question it, or deny it. A noun with the declarative suffix acts as a verbal-noun.

Positive declarative suffix:

{-e}	-e at all times	
toie		<i>It's a person</i>
toi	-e	
stem	dec	
a hapole		<i>It's my house</i>
hapol	-e	
stem	dec	

Question declarative suffix:

{-a}	-a at all times	
toia?		<i>Is it somebody?</i>
toi	-a	
stem	dec	
a hapola?		<i>Is it my house?</i>
hapol	-a	
stem	dec	

Negative declarative suffix:

{-ai}	-ai at all times	
toi ^{ai}		<i>It's not a person</i>
toi	-ai	
stem	neg/dec	
a hapol ^{ai}		<i>It's not my house</i>
hapol	-ai	
stem	neg/dec	

2. Noun Copula Clitic

As well as the first order declarative suffixes the Pawaian noun also may have the copula clitic suffixed to it, in second order position.

Copula clitic: {-mo} -mo at all times

pemo	oimo	<i>boy and girl</i>	
pe	-mo	oi	-mo
stem	cop	stem	cop
a	peemo	oiemo	<i>Those are boys and girls</i>
pe	-e	-mo	oi -e -mo
stem	dec	cop	stem dec cop

Noun Formulae

The noun structure of the two languages can be summarized by the following formulae and statements.

Kuman

$$n1 = + \text{nuc:ns} \pm \begin{matrix} \text{poss:pm} \\ \text{equat:vblzr} \end{matrix}$$

A class one noun consists of an obligatory noun nucleus slot filled by a noun stem, optionally followed by either a possessive slot filled by a person marker, or an equational slot filled by a verbalizer.

$$n2 = + \text{nuc:ns} + \begin{matrix} \text{poss:pm} \\ \text{equat:vblzr} \end{matrix}$$

A class two noun consists of an obligatory noun nucleus slot filled by a noun stem, followed by either an obligatory possessive slot filled by a person marker or an obligatory equational slot filled by a verbalizer.

Pawaian

$$n = + \text{nuc:ns} \pm \text{equat:vblzr} \pm \text{coord:cop}$$

A noun consists of an obligatory noun nucleus slot filled by a noun stem, followed by an optional equational slot filled by a verbalizer, followed by an optional coordinator slot filled by a copula.

Other Parts of Speech

All other parts of speech are uninflected particles with the exception of the following:

1. The Kuman interrogative *sirag* meaning *what?* takes the verbalizing suffix *-ne* when there is no verb in the construction.
2. The Pawaian numeral adjectives take the coordinating clitic *-mo* and the coordinating prefix *-a*.
3. The Pawaian demonstrative pronouns take the verbalizing suffix *-pa*.

PERSONAL PRONOUNS

Personal pronouns are fillers of clause level, subject, object, indirect object, accompaniment and location slots. They substitute for noun phrases. They have particular interest value in the

comparison of the two languages inasmuch as it is the only comparison that gives a high percentage of cognates. Pawaian has only three personal pronouns and all three are cognated with the corresponding Kuman pronouns.

For example:

Pawaian	Kuman	English
ana	na	<i>I, me</i>
ono	ene	<i>you</i>
nono	nono/no	<i>we, us</i>
-	ye	<i>he, him, they, them</i>

A common feature in both languages is that they do not distinguish between the form of the subject pronoun and the object one. The differences between the languages are found in their use of possessives, the third person, and the first person plural.

1. Possessives

In Kuman the possessive pronoun and the personal pronoun are one and the same. Ambiguity is avoided by the use of possessive suffixes on owned nouns.

For example:

na	ag ⁴ ina	ag ⁴	-ina	<i>my dog</i>
<i>I</i>	<i>dog-my</i>	<i>stem</i>	<i>poss</i>	
ene	gag ⁴ in	gag ⁴	-in	<i>your bag</i>
<i>you</i>	<i>bag-your</i>	<i>stem</i>	<i>poss</i>	

Pawaian, however has a set of possessive pronouns. The set only consists of two forms, but these are used to show possession at all times. They are:

a	<i>my, our</i>
ma	<i>your, his, their</i>

For example:

a	h ₄	<i>my dog</i>
	<i>my dog</i>	
ma	wo	<i>your bag</i>
	<i>your bag</i>	
ma	wo	pani anaia <i>where is your bag?</i>
	<i>your bag</i>	<i>where situated</i>

2. Third Person Pronouns

The difference here lies in the fact that Pawaian has no third person pronouns. It uses demonstratives instead, often in conjunction with a noun.

For example:

Kuman

ye	kanugua	<i>He saw</i>
he	saw	
ye	gag ⁴ imo	<i>Her bag</i>
she	bag-her	

Pawaian

á	sopulu	<i>His bow</i>
this-(ones)	bow	
wa	al wo	<i>Her bag</i>
that woman	bag	
a (toi)	henue	<i>He saw</i>
this (man)	saw	

3. First Person Plural Pronouns

In Kuman there are two first person plural pronouns, but in Pawaian there is only one. Kuman has the two pronouns because in this language, the speaker likes to make clear whether the one spoken to is included or excluded in the action referred to. Thus *no* is used if the referent is excluded, *nono* if he is included. In Pawaian no effort is made to make these distinctions.

For example:

Kuman

no	ugug ⁴ enomun ene akie enatinga
<i>we(excl) house want you also went</i>	
<i>Because we went home you went also</i>	
no	ugug ⁴ pira pira enamga
<i>we(incl)house everybody will-go</i>	
<i>We'll all go home</i>	

Pawaian

nono hapol	petinono petie
<i>we house went you went</i>	
<i>We went to the house</i>	
nono hapol	nein na petaie
<i>we house all will-go</i>	
<i>We'll all go home</i>	

DEMONSTRATIVE PRONOUNS

Demonstrative pronouns in Pawaian occur as fillers of the equational clause demonstrative slot, and the noun phrase demonstrative slot.

They occur in Kuman as fillers of the noun phrase demonstrative slot. In the Pawaian equational clause, demonstratives take the verbalizing suffix *-pa*.

For example:

Kuman

i	bug†a	<i>This pig or This is a pig</i>
	<i>this pig</i>	
ida	ugug† podo	<i>That big house or That is a big house</i>
	<i>that house big</i>	

Pawaian

ś	ya	<i>This pig</i>
	<i>this pig</i>	
apa	ya	<i>This is a pig</i>
	<i>this-is pig</i>	
wa	hqi hapol	<i>That big house</i>
	<i>that big house</i>	
wapa	hqi hapol	<i>That is a big house</i>
	<i>that-is big house</i>	

DESCRIPTIVE ADJECTIVES

Descriptive adjectives occur as fillers of head slots in descriptive adjectival phrases. They have the same function in both languages.

For example:

Kuman

(descriptive adjectives are in capitals)

gak	WAKAI	<i>The good boy</i>
	<i>boy good</i>	
yag†	OLTO PODO	<i>The big tall man</i>
	<i>man tall big</i>	

Pawaian

M0I	pe	<i>Good boy</i>
	<i>good boy</i>	
IOI	MEI toi	<i>The big tall man</i>
	<i>tall big man</i>	

COLOUR ADJECTIVES

Colour adjectives occur as fillers of colour slots in noun phrases. Their function is the same in both languages.

For example:

Kuman

ag†	KAMA	<i>Black dog</i>
	<i>dog black</i>	
kobug†o	KRUO podo	<i>Big white stone</i>
	<i>stone white big</i>	

i keine GOG⁴ suo *These two red tree kangaroos*
this tree-kangaroo red two

Pawaiian

opu hā *black dog*
black dog

mei topu P01 big white stone
big stone white

a SIA wol nau *these two red tree kangaroos*
this red tree-kangaroo two

NUMERAL ADJECTIVES

Nominal adjectives occur as fillers of the head slot of nominal phrases. These in turn are fillers of noun phrase quantity slots.

Numeral adjectives have the same function in both languages in that they modify a head noun by indicating how many of it are being referred to. They differ inasmuch as the Pawaian numeral takes a numeral coordinator as a prefix, and a phrase coordinator as a clitic.

For example:

Kuman

edi SUARA one tree
tree one

gak kidan SUO SUO *four hungry boys*
 boy hungry two two

yag⁴ SUO ya abumo SUATA *two men and three women*
 men two and women three

Pawaiian

in POMI one tree
tree one

simini pe NAU ANAU *four hungry boys*
hungry boy two and-two

yala NAUMO al NAU APOIMO Two men and three women
man two-and woman two and-another
-and

Pawaian Numeral Formula

adj(num) = ± num co:num cop + anuc:stem ± ph co:ph cop
that is, a numeral adjective consists of an optional numeral
coordinator filled by a numeral copula, followed by an obligatory
adjective nucleus filled by an adjective stem, followed by an
optional phrase coordinator filled by a phrase copula.

INTERROGATIVES

Interrogatives occur as fillers of the clause level interrogative slot. Their function is the same in both languages. They ask how, where, or why a thing is done. They differ inasmuch as Kuman interrogatives take a verbalizing suffix.

For example:

Kuman

i SIRATINE What is this?
this what-is

ene SIRAG⁴ toporatine? *What would you like to buy?*
 you what buy?

ene din AG⁴0 yome *Where is your axe?*
 you axe-your where situated

Pawaian

ápa NOI *What is this?*
 this-is what

ono noi wetaalia *What will you buy?*
 you what will-buy

ma kope pani inaia *Where is your axe?*
 your axe where situated

RESPONSES

Responses occur as fillers of clause level response slots. Their function is the same in both languages. They come as a response to a question.

For example:

Kuman

OWO, i nig⁴ *Yes it's water*
 yes this water

TAMAN, yag⁴ edi ugug⁴ enabuka *No, the man went*
 no man motion house went home

Pawaian

OUI apa sa *Yes it's water*
 yes this-is water

SE, toi pai hapol nue *No, the man went home*
 no man focus house gone

ADVERBS OF MANNER

Adverbs of manner occur as fillers of the verb phrase modifying slot. They state the manner in which an action is committed.

For example:

Kuman

ye TABIRE edi ogua *He went quickly*
 he quickly motion went

gak ag⁴ YOBUG⁴ARE sugua *The boy hit the dog hard*
 boy dog hard hit

Pawaian

á TUI petie *He went quickly*
 this quickly went

pe hā PQANA nawaue *The boy hit the dog hard*
 boy dog hard hit

ADVERBS OF LOCATION

Adverbs of location occur as fillers of clause level location slots in Pawaian, and as fillers of location slots in verb phrases in Kuman. Pawaian adverbs fill the same slot as noun phrases. Kuman adverbs do not substitute for noun phrases in clause level slots.

For example:

Kuman

yag† ogua IDA *The man went there*
 man went there

yag† waile ogua *The man went to the garden*
 man garden went

na edi wiga SUG†0 *I came here*
 I motion came here

Pawaian

toi WENI nue *The man went there*
 man there gone

toi moilo nue *The man went to the garden*
 man garden gone

ana ENI petoe *I came here*
 I here came

ACCOMPANIMENT POSTPOSITION

Accompaniment postpositions occur as fillers of accompaniment phrase relator slots. They function the same in both languages.

For example:

Kuman

gak ye BOG† ogua *He went with the boy*
 boy he with went

abumo bug†a BOG† neugua *The pig ate with the woman*
 woman pig with ate

Pawaian

pe toi POMINISOI nue *The man went with the boy*
 boy man with gone

al ya POMINISOI hanue *The pig ate with the woman*
 woman pig with ate

MOTIONAL PARTICLE

A motional particle occurs as a filler of a verb phrase motion slot. It does not occur in Pawaian.

For example:

na EDI wiga *I have come*
 I motion come

yag† EDI ugug† ogua *The man went to the house*
 man motion house went

ye ene akesuna EDI maug† *He will help you dig a*
 he you help motion hole hole
 perenabuka
 dig .

PHRASE COORDINATING PARTICLE

A phrase coordinating particle occurs as a filler of the coordinating slot of Kuman coordinate noun phrases. It does not occur in Pawaian.

For example:

bug†a YA ag† *Pig and dog*
 pig and dog

sune kabe YA dikiri YA *There are bananas, corn and*
 there banana and corn and taro growing
 me eriag†ka
 taro growing

kobug†o kruo YA edi kama *The white stone and the*
 stone white and stick black black stick

FOCUS PARTICLE

A focus particle occurs as a filler of the focus slot in Pawaian noun phrases. It does not occur in Kuman. It is used to bring a given phrase into the spotlight of attention.

For example:

wa pe PAI h† nawaue *That boy hit the dog*
 that boy focus dog hit

ana moilo PAI petoe I shot it in the garden
I garden focus shot

ana wa toi PAI hetoe I saw that man
I that man focus saw

CONCLUSION

In the introduction to this thesis, it was stated that an effort would be made to test the validity of an hypothesis which states that the degree of relationship of two languages can be determined by the number of synonymous cognates which are found in a Swadesh 100 word list. The thesis is making no attempt to test any glottochronological claims made by Swadesh, but simply to see if a small positive lexical correlation between two languages shows also a similar correlation in a comparison of the phonological and grammatical structures of the languages.

Before coming to a conclusion, a summary of the similarities and dissimilarities will be given, and then it will be decided whether the similarities of the two languages are slight, but yet sufficient to justify the claim that Pawaian and Kuman are remotely related languages.

Kuman/Pawaian Similarities and Dissimilarities

Lexicon

On the Swadesh list only 8 per cent probable cognates were found. Another list of 100 words showed only 3 per cent cognates.

Phonology

The vowel phonetic segments are very similar:

Kuman	Pawaian
i	i
ɪ	
e	
	ɛ
a	a
ɔ	ɔ
o	o
u	u

In Kuman the segments divide into a five vowel system, and in Pawaian to a six. The sixth vowel of Pawaian is rare.

Consonantal segments are also quite similar:

Kuman	p ^h	p	b	m	b	ɾ	t ^h	t	n	d	k ^h	k	g	ŋ	g	t ^s	s	l	k ^ɰ
Pawaian	p ^h	p	b			ɾ	t ^h	t	d		k ^h	k	g			s	h	ɾ	ɿ

Kuman	g ^h	m	n	b	w	y
Pawaian		m	n		w	y

Of twenty-six segments, fifteen are common to both languages. The differences are that Kuman has prenasalized stops, and velar lateral affricates.

The presence of tone and nasalization in Pawaian makes the language sound quite different from Kuman. Twenty-four vowel contrasts, against the five of Kuman, plus a few number of consonants (10 compared with Kuman's 14) and the fact that Pawaian has no consonant clusters gives it a musical quality not found in Kuman. Yet the syllable patterns are identical.

Clause Structure

Equational Clauses

Demonstrative and verbal equational clauses are almost identical. Kuman however has also stative and negative equational clauses.

Predicate Clauses

The similarities between the Pawaian predicate clause and the Kuman Independent Final Clause, are quite evident. The fact that response, time, subject, instrument, object accompaniment, and predicate slots have the same distribution within the clause would suggest some sort of relationship between the languages. Also the preference of both languages for breaking utterances down into many short clauses instead of long ones suggests some sort of affinity. However, the presence in Kuman of three medial type clauses and the complete absence of them in Pawaian, makes the dissimilarities of the two languages far more prominent in any comparative study than their similarities.

Phrase Structure

Noun Phrases

As in the clause structure so also in the structure of the noun phrase. Descriptives preceding the noun in Pawaian but following it in Kuman makes the difference of phrase structure stand out. The focus marker of Pawaian reminds one of Polynesian languages rather than those of New Guinea. However, under closer study there are similarities which would lead one to believe that there could be some relationship between them after all.

The fact that the demonstrative comes first in the phrase, and the numeral comes last (excluding the focus particle) is significant. Also the way both languages fill the descriptive and quantity slots with the same type of phrases allows the possibility of relationship, though it needs to be remembered that one would expect to find

descriptive phrases in both languages, and the absence of them in one of the languages would have more significance than the presence of descriptive phrases in them both.

Other Phrases

Descriptive phrases are identical in both languages. Numeral phrases are similar, but the difference in the numbering systems of the two languages is very striking and points to the languages as being quite remote in their relationship. The coordinators in Coordinated noun phrases are again very different and indicate separateness. The accompaniment phrases are identical in structure, with both languages using postposition particles to indicate the relationship. Also we notice that time phrases are identical, but as both simply use juxtaposed time expressions, this does not hold much weight as evidence for relationship. The fact that Kuman has mobility and locative slots in the verb phrase, when Pawaian does not, and Pawaian has a negative slot which is absent in Kuman, emphasizes the differences in the languages. The one indication of possible relationship is found in the fact that both languages have the modifying adverb in the same place.

Morphology

Generally speaking, the forms of the various morphemes functioning as affixes do not show any noticeable likenesses in the two languages. Therefore to establish any hypothesis of relationship one will have to look deeper and see if there are any structural similarities.

The Verb

In the verb, we have noticed many dissimilar morphemes, but again, we can find enough correspondences to suggest some distant relationship between the languages. For example, both languages divide the universe into two aspects rather than into several tenses. Both languages have a declarative slot in the verb, both use suffixes as intensifiers, use a question affix within the declarative slot, and only use suffixes as verb affixes.

However, in case we are inclined to over emphasize these common shared features we need to remember that the differences within the verb structure are indeed great. The fact that the affixes show hardly any likeness in their form, suggests a great degree of separateness, while the absence of any medial form of the verb in Pawaian, a feature which is universal to the whole of the Eastern Highland language stock, sharply divides it from Kuman. Then also the absence of dual forms in Pawaian, and the absence of all person/number distinctions outside the first and third singular stative

forms, makes a great structural gap between the two languages. As well as these greater differences there are also minor ones. The negative having its own slot in Kuman instead of being included in the declarative one, stative forms found in Pawaian but not in Kuman, and the presence of a future suffix in Pawaian make it impossible to see anything but the remotest relationship between the languages.

Nouns

Within the structure of the noun there are several differences which emphasize remoteness between the languages. In Kuman the nouns are divided into two classes according to whether they are obligatorily possessed or not. There is no such division in Pawaian. In Kuman possessives are affixed to the noun. This is not so in Pawaian. In Pawaian, however, the noun takes a negative suffix and a second order clitic which functions as a coordinator, things that are lacking in Kuman.

Even with all these differences there is one common feature in the noun structure which allows us to accept a possibility of relationship. This feature is found in the ability of the noun to be verbalized by means of a verbalizing suffix - one suffix making a statement, and another questioning it.

Personal Pronouns

The personal pronouns of the two languages have their differences. Pawaian has no third person pronoun, but uses demonstratives. Kuman has the personal pronoun *ye* for this function. Kuman makes distinction between inclusive and exclusiveness in regards to first person plural and dual pronouns - a distinction that is not made in Pawaian. Kuman uses personal pronouns as possessives whereas Pawaian has a set of possessive pronouns.

The differences are considerable, but the remarkable fact that all three Pawaian pronouns are close cognates of the Kuman ones makes it difficult to conceive of the languages as being anything but closely related. It is only the fact that all other aspects of the two languages are so different that a hypothesis of close relationship is untenable.

Demonstrative Pronouns

The way demonstratives in the two languages function in equational clauses are strikingly similar, though the use of a verbalizing suffix in Pawaian and its absence in Kuman suggests not too close a relationship.

Interrogatives

The interrogatives of both languages function the same, but Kuman

takes a verbalizing suffix and Pawaian does not.

Numeral Adjectives

These have the same function in both languages but Pawaian takes a numeral coordinating prefix and a phrase coordinator clitic, neither of which occur in Kuman.

Focus Particle

This only occurs in Pawaian. Its presence suggests a different language type to that of Kuman.

Motional Particle

This only occurs in Kuman, and is also a significant difference.

Phrase Coordinator

This only occurs in Kuman as a free form particle so the difference again has significance in any hypothesis suggesting remoteness of relationship.

Adverbs of Location

There is a significant difference between these in the two languages as Kuman adverbs of location are modifiers in a verb phrase whilst the Pawaian ones fill clause level slots.

Other Parts of Speech

All other adverbs and adjectives are the same in both languages. This is not particularly significant, however, as they are all uninflected particles. The fact that both languages mark accompaniment by a postposition does have significance though, for many New Guinea languages mark accompaniment with verb suffixes.

Summary of Similarities and Dissimilarities

It is profitable to summarise the previous discussion by making two lists, one of significant similarities and the other of dissimilarities.

Significant Dissimilarities

Phonology

Tone and nasalization in Pawaian.
Consonant clusters in Kuman.

Clauses

Inclusion of stative clauses in Kuman.
Medial clauses in Kuman.

Phrases

Differences in descriptive slot.
Inclusion of Pawaian focus marker.

Different counting systems.
 Difference of noun phrase coordinators.
 Differences of verb phrase - Kuman with
 mobility and locative slots.

Verbs

No likeness in the form of the affixes.
 Kuman has separate endings for medial verbs.
 Kuman has dual forms.
 Pawaian does not distinguish person and
 number in non-stative form.
 Pawaian has stative form in first and
 third singular.
 Kuman has negative slot.
 Future suffix in Pawaian.

Nouns

Two noun classes of Kuman.
 No possessive suffixes in Pawaian.
 Pawaian negative suffix.
 Pawaian coordinating clitic.

Pronouns

Kuman third person pronoun.
 Kuman exclusive versus inclusive first
 person pronouns.
 Pawaian possessive pronoun.
 Pawaian demonstrative verbal suffix.

Interrogatives

Kuman interrogative takes verbalizing
 suffix.

Adjectives

Pawaian numeral adjective takes
 coordinating prefix.
 Pawaian adjectives take phrase
 coordinating clitic.

Particles

Pawaian locative adverbs fill location
 clause slot.
 Pawaian focus marker.
 Kuman phrase coordinator

Significant Similarities

Clauses

Similarity of equational clause structure.
Similarity of Pawaian predicate and Kuman independent clause.

Phrases

Demonstratives and numerals have same distribution in noun phrase.
Accompaniment phrases identical.
Modifying adverb in same place in verb phrase.

Verbs

Both have two aspects rather than tenses.
Both have declarative slot.
Both have verb intensifier.
Both have question in declarative slot.
All verb affixes are suffixes.

Nouns

Nouns in both languages take verbalizing suffix.

Pronouns

Pawaian pronouns close cognates of equivalent Kuman ones.
Demonstratives function similarly to form equational clauses.

Examination of Hypothesis

Let us now consider the hypothesis. For it to hold the low percentage of cognates will reflect slight structural similarities which will reinforce the statement that the proportion of cognates in a Swadesh list will correlate with the degree of relationship between two languages. Thus we will expect the dissimilarities between the languages to be great, but at the same time there will be enough similarities so that we can accept as factual that the languages are related.

As far as dissimilarities are concerned they are indeed great. The medial clauses of Kuman and the differences in their verb structure is in itself enough evidence to put the languages into different families. The fact that practically all the affixes in the languages are dissimilar in form, and that Pawaian fails to use the

complexities of person/number indicators that are found in Kuman and has no possessive suffixes in the noun, one could hardly postulate that the languages are of the same stock. Add to these the many minor differences found in the list of dissimilarities, nothing but the most distant relationship could possibly be envisaged.

The question then, is to decide whether there is enough evidence of relationship to discount chance or borrowing as the real reason for the similarities.

The answer to this question becomes obvious when we consider some very striking and sometimes unexpected similarities in the two languages. In the midst of so many differences one would only hope for slight resemblances, but to find the three Pawaiian pronouns almost identical with their Kuman counterparts is so astounding that one suspects there may be some reason other than relationship to explain it. There are two reasons that could account for it. One is that there was borrowing and the other is that the similarities are simply due to chance.

Until 1960 the Kumans and Pawaiians had almost certainly no contact with each other. There were two other language groups between them, and though the Pawaiians ventured a long way into these other languages on trading expeditions, the closest they came to Kuman people was two days' walk away. If then, direct borrowing cannot be postulated, perhaps they both borrowed from some third language. This however is a very remote possibility. In the first instance we have evidence that these particular pronouns resist change and borrowing. This is the reason that they are included in Swadesh's 100 word list. Then also the only time they are readily lost in a language is when word taboos are in force. Word taboos come in Kuman or Pawaiian society only when the word is the name of a very small child. Even then the term is only avoided when direct reference to the child is meant. When somebody else has the same name, the taboo does not come into force when referring to him. Thus we would not expect word taboo to explain the possibility of borrowing.

Could force by some dominant third language group be the cause then?

Kuman is the dominant language group of its area and there is no evidence that they have ever been dominated by any other group. The Pawaiians live in dense jungle. They are still semi-nomadic in their habits and were difficult to locate let alone subdue. Then, also the larger language groups to the north left the Pawaiians alone because of their fear of sorcery. In the north the Pawaiians are reputed to be fearsome sorcerers. This is probably due to the prevalency of malaria

in Pawaian land. Highlanders staying in Pawaian country soon fall victim of the disease.

If then, we exclude borrowing as a factor of similarity what about chance?

In a closed class of pronouns we find that we have 100 per cent cognation as far as the Pawaian personal pronouns are concerned. The probability of chance being the factor is so remote on statistical grounds that it is absurd to even consider it.

It is not only the close resemblance of the pronouns that force us to accept the fact that the two languages are cognatic. We also have other similarities. The similarity of the phonological structure, the close resemblance of Kuman independent clauses with the Pawaian predicate ones, the identical aspect systems, declarative slots and intensifiers within the verb structures, are all strong reasons for concluding that Pawaian and Kuman are descendents of the one and the same language.

It is therefore concluded that the structural evidence found in a comparison of the Kuman and Pawaian languages agrees with the lexico-statistical evidence, that these two languages are in fact related, but only remotely so.

N O T E S

1. See 'Linguistic Survey of S.W. Pacific' page 120. (In other works Wurm states Pawaian to be unrelated to the phylum, probably attributing the low percentage of cognates to chance factors).
2. According to Wurm this would put Pawaian in the same micro-phylum as the Eastern Highland Stock. See S.A. Wurm 'Linguistic Situation in Highlands Districts of Papua and New Guinea' page 17.
3. In the practical orthography which will be used in the rest of the discussion, tone marks are not used except when there may be ambiguity in the meaning, and the Pawaian phoneme /ɔ/ will be represented as *or*.
4. This terminology is taken from Longacre 'Grammar Discovery Procedures' page 35.
5. *owo yes* is used when agreeing in the negative, and *taman no* when disagreeing in the negative.
6. These symbols have the following meaning:
 - ~ phonemically defined allomorphs
 - ∞ morphemically defined allomorphs
 - grammatically defined allomorphs
 - { } morpheme class

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